

# Service Manual

**TV / VCR Combination**

**CHASSIS : CN-071**

**MODEL : DVQ-13H1FC**

**DVQ-19H1FC**

**DVQ-13H2FC**

**DVQ-19H2FC**



**DAEWOO ELECTRONICS CO., LTD**  
<http://svc.dwe.co.kr>

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# SAFETY PRECAUTIONS

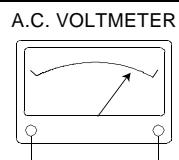
**CAUTION :** DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY. SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER. WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

## SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED, A CHECK SHOULD BE MADE OF THE FOLLOWING:

## SUBJECT: FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE, THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OF SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTOR, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES. DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET. (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS, HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER: CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150V A.C. TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED .75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP A.C. ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.

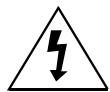


PLACE THIS PROBE  
ON EACH EXPOSED  
METAL PART

## SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION ON SERVICE LITERATURE.

## SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, AMY PRODUCE RADITION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS X-RAY SHIELD IN COLOR SETS. ALWAYS RE-INSTALL THEM.
3. IT IS ESSENTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED, THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE, AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV, B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

## SUBJECT : IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRA IMPLOSION PROTECTION SYSTEM. BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION. AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

## SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE, OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERS MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM, BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

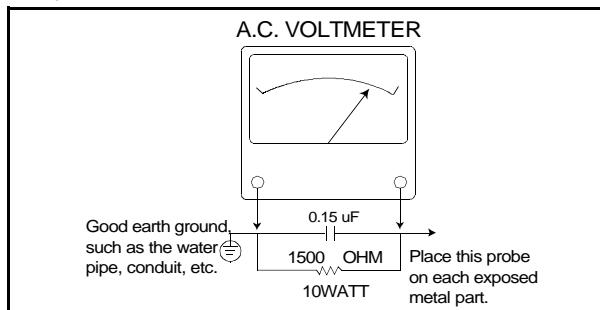
**CAUTION :** Do not attempt to modify this product in any way. Unauthorized modifications will not only void the warranty, but may lead to your being liable for any resulting property damage or user injury. Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines. To do otherwise, increases the risk of potential hazards and injury to the user.

### SAFETY CHECKS

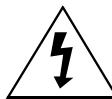
After the original service problem has been corrected, a check should be made of the following:

#### SUBJECT : FIRE & SHOCK HAZARD

1. Be sure that all components are positioned in such a way as to avoid possibility of adjacent component shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Never release a repair unless all protective devices such as insulators, barriers, covers, shields, strain reliefs, and other hardware have been reinstalled per original design.
3. Soldering must be inspected to discover possible cold solder joints, frayed leads, damaged insulation (including A.C. cord), solder splashes or sharp solder points. Be certain to remove all loose foreign particals.
4. Check for physical evidence of damage or deterioration to parts and components, and replace if necessary follow original layout, lead length and dress.
5. No leads or components should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. All critical components such as fuses, flameproof resistors, capacitors, etc. must be replaced with exact factory types. Do not use replacement components other than those specified or make unrecommended circuit modifications.
7. After re-assembly of the set always perform an A.C. leakage test on all exposed metallic parts of the cabinet, (the channel selector knob, antenna terminals, handle and screws) to be sure the set is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this test. Use an A.C. voltmeter, having 5000 ohms per volt or more sensitivity, in the following manner : connect a 1500 ohm 10 watt resistor, paralleled by a 15 mfd. 150V A.C. type capacitor between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the A.C. voltage across the combination of 1500 ohm resistor and 0.15 MFD capacitor. Reverse the A.C. plug and repeat A.C. voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts R.M.S. This corresponds to 0.5 milliamp A.C. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



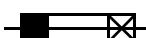
#### GRAPHIC SYMBOLS :



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the service personnel to the presence of uninsulated "dangerous voltage" that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the service personnel to the presence of important safety information in service literature.



Fuse symbol is printed on pcb adjacent to the fuse, with "RISK OF FIRE REPLACE FUSE AS MARKED". The symbol is explained in the service manual with the following wording or equivalent.

**"CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE (6.3A, 250V)" and "ATTENTION: AFIN D'ASSU UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET DE "6.3A, 250V".**

#### SUBJECT : X-RADIATION

1. Be sure procedures and instructions to all service personnel cover the subject of X-rays in current T.V. receivers is the picture tube. However, this tube does not emit X-rays when the high voltage is at the factory specified level. The proper value is given in the applicable schematic. Operation at higher voltages may cause a failure of the picture tube or high voltage supply and, under certain circumstances, may produce radiation in excess of desirable levels.
2. Only factory specified C.R.T. anode connectors must be used. Degaussing shields also serve as X-ray shield in color sets. Always re-install them.
3. It is essential that the serviceman has available an accurate and reliable high voltage meter. The calibration of the meter should be checked periodically against a reference standard. Such as the one available at your distributor.
4. When the high voltage circuitry is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be run up and down while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly. We suggest that you and your service organization review test procedures so that voltage regulation is always checked as a standard servicing procedure. And that the high voltage reading be recorded on each customer's invoice.
5. When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage compartment. Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.
6. Refer to HV, B+ and Shutdown adjustment procedures described in the appropriate schematic and diagrams (where used).

## SAFETY PRECAUTIONS

### SUBJECT : IMPLOSION

1. All direct viewed picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage during installation. Avoid scratching the tube. If scratched, replace it.
2. Use only recommended factory replacement tubes.

### SUBJECT : TIPS ON PROPER INSTALLATION

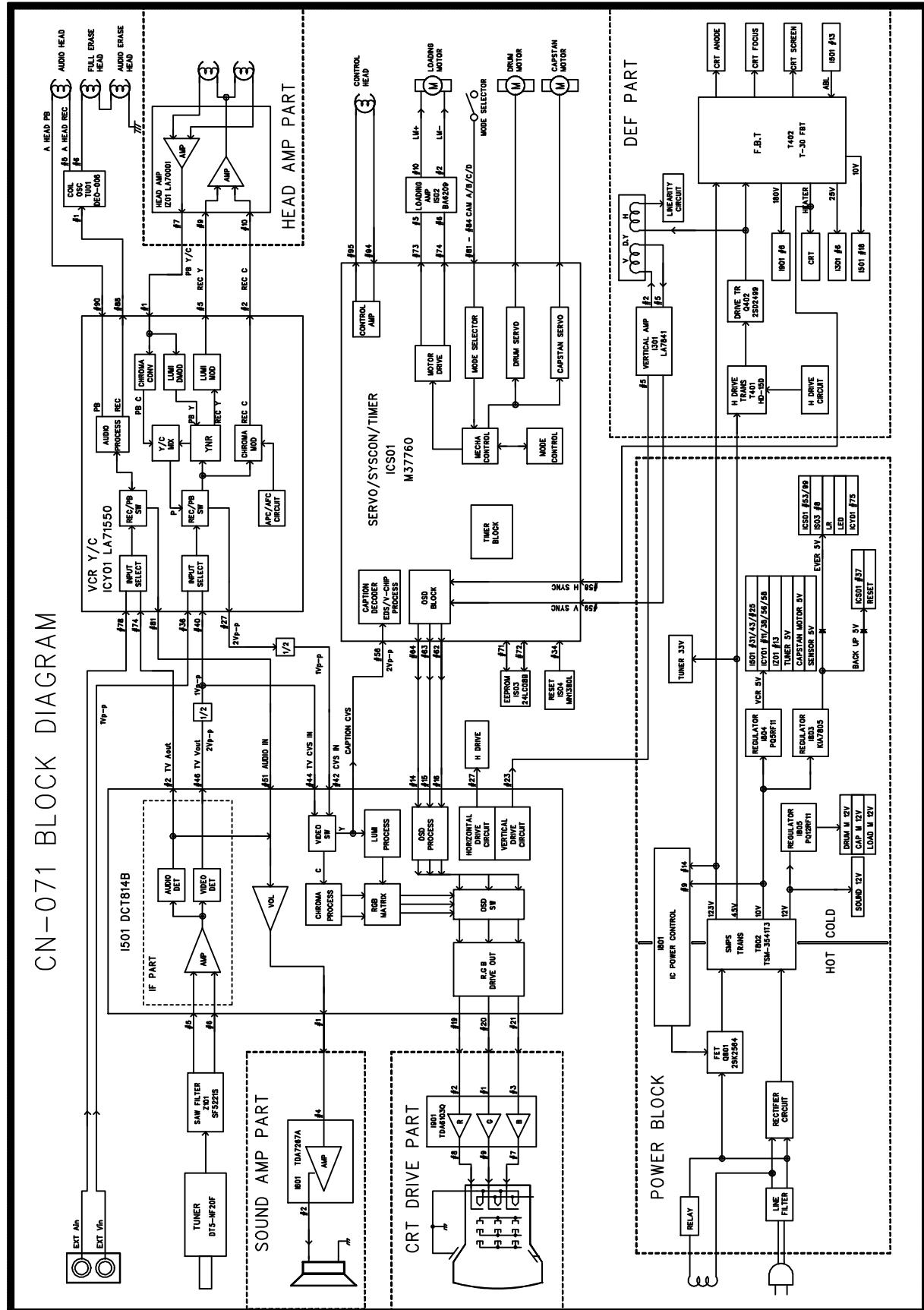
1. Never install any receiver in closed-in recess, cubbyhole or closely fitting shelf space over, or close to heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as : Outdoor patio installations where dew is a factor. Near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct rear venting. The customer should also avoid the use of decorative scarves or other coverings which might obstruct ventilation.
4. Wall and shelf mounted installations using a commercial mounting kit, must follow the factory approved mounting instructions. A receiver mounted to a shelf or platform must retain its original feet(or the equivalent thickness in spacers) to provide adequate air flow across the bottom, bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage test on customized installations.
5. Caution customers against the mounting of a receiver on sloping shelf or a tilted position, unless the receiver is properly secured.
6. A receiver on a roll-about cart should be stable on its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against the use of a cart or stand which has not been listed by underwriters laboratories, inc. For use with their specific model of television receiver or generically approved for use with T.V.'s of the same or larger screen size.

# SPECIFICATION

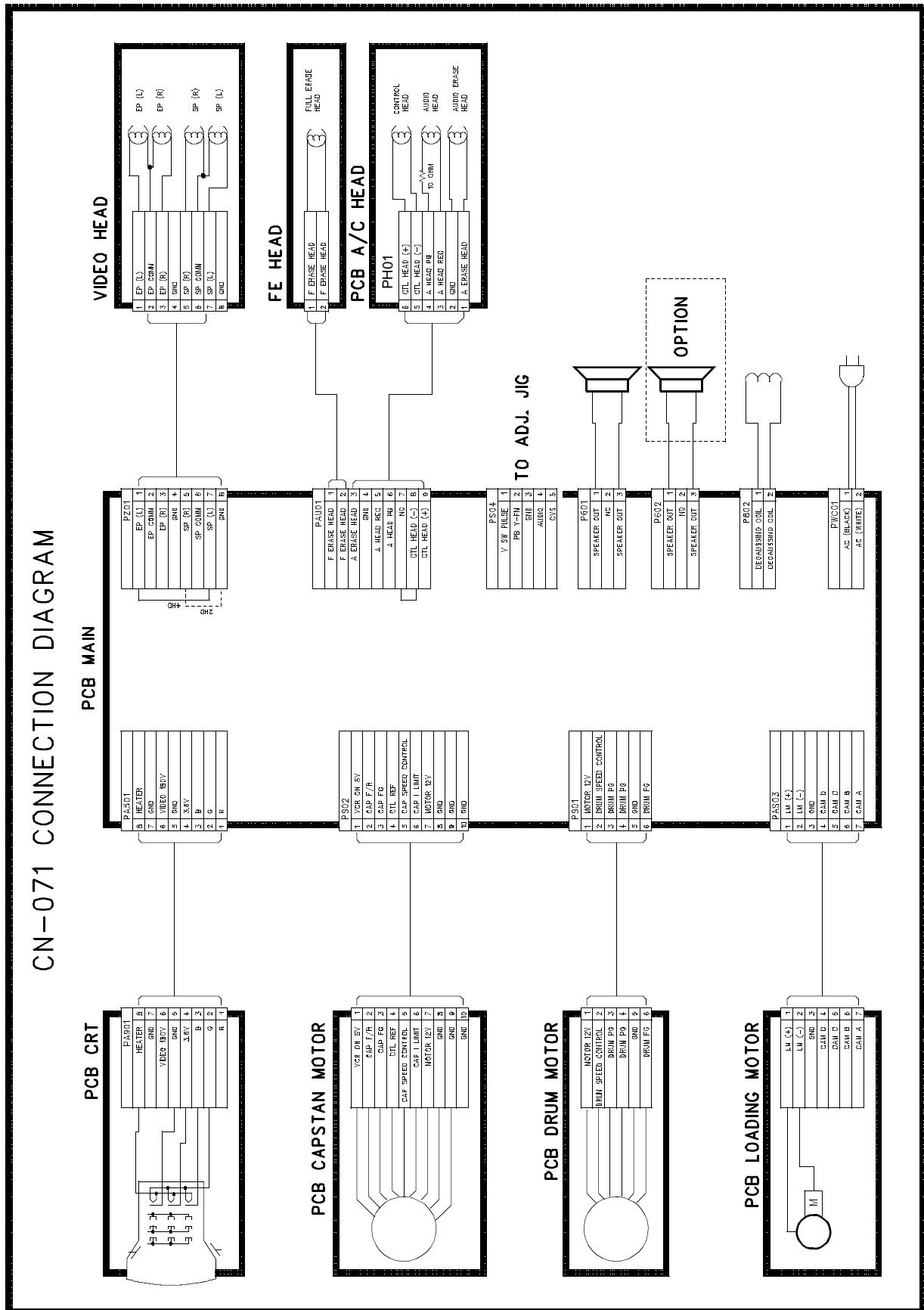
ITEMS	MODEL	DVQ-13/19H1FC, DVQ-13/19H2FC	REMARK
TV SECTION	STANDARD	NTSC-M	
	TUNING SYSTEM	Frequency Synthesizer(FS) Tuning System	
	TUNING RANGE	VHF : 2 - 13(12) UHF : 14 -69(56) CATV : 1-125(125)	
	ANTENNA INPUT IMPEDENCE	75 ohm Unbalanced	
	AUXILIARY INPUT TERMINAL	Front : Video, Audio	
VIDEO SECTION	FORMAT	VHS NTSC Standard	
	VCR SYSTEM	Rotary 2-Head Helical Scanning Monaural System	
	AUDIO RECORDING SYSTEM	Monaural	
	TAPE SPEED	SP:33.35mm/sec; EP:11.12mm/sec LP:16.67mm/sec PLAY ONLY	
	INPUT	Video :1Vp-p,75 Ohm Audio :3.8dBm, over 100K Ohm	
	TIMER PROGRAMMING	6 Event/1 Month	
GENERAL	POWER INPUT	AC 120V 60Hz	
	POWER CONSUMPTION	13=60W 19=70W	
	SOUND OUTPUT	1.3W	
	SPEAKER	3W 8 OHM	
	OPRATING TEMPERATRE	5 °C to 40 °C	
	REMOTE CONTROL	R-39A02	
	SPECIAL FUNTION	3-Language OSD With CAPTION Parental Control K-MECHA One Touch Record Repeat Play Energy Star Power (Stand-By:2W Under)	

# BLOCK DIAGRAM

CN-071 BLOCK DIAGRAM



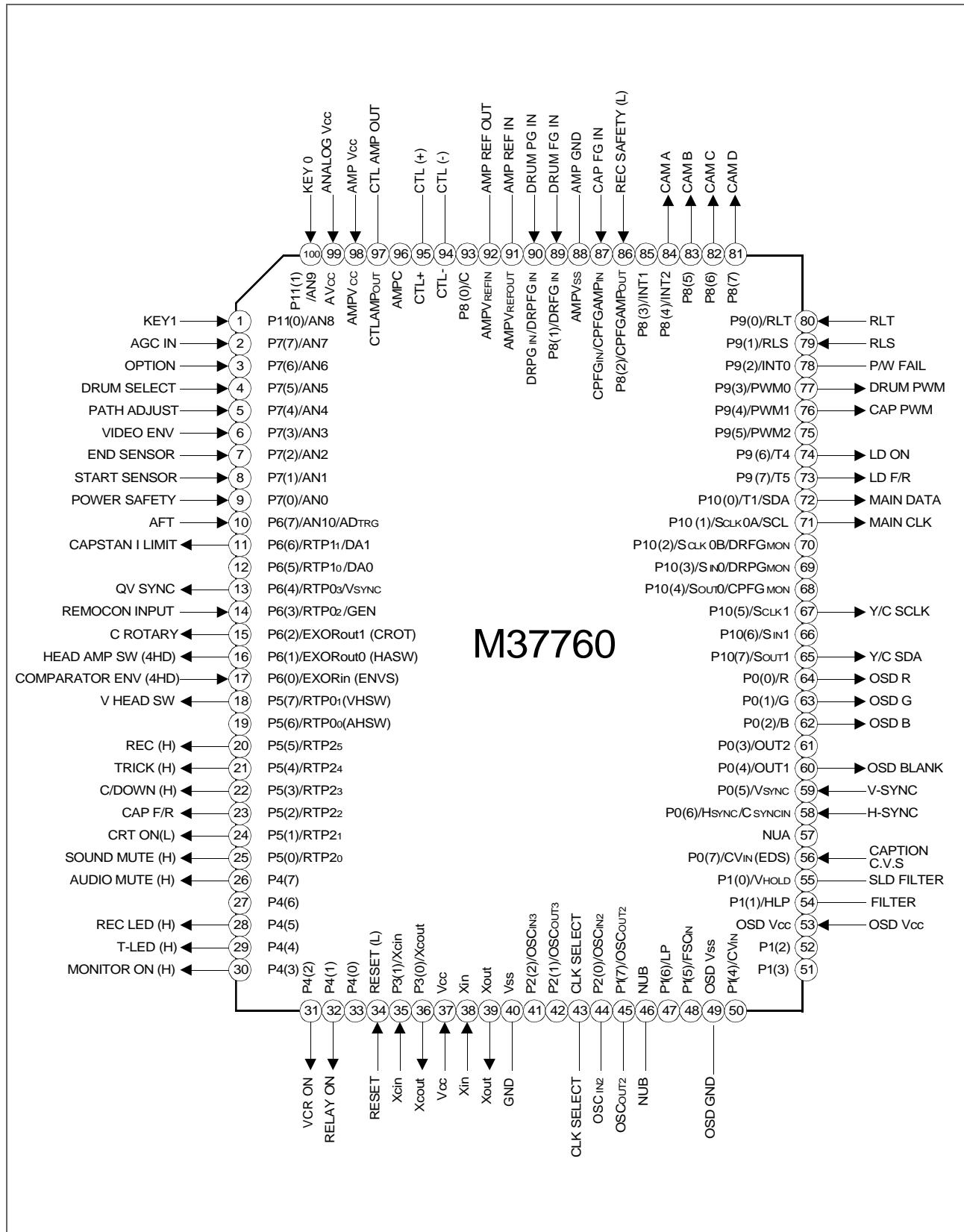
CN-071 CONNECTION DIAGRAM



# IC DESCRIPTION

ICS01

DW37760MCA-AA1(M37760) : IC TIMER / SYSCON / CTL PROCESSOR



## 1. SYSTEM FEATURE

- 1) The system for TV/VCR tuning is Frequency Synthesis type.
- 2) VCR SERVO Controller is interior designed.
- 3) Closed Caption function is interior designed.
- 4) Parental Control function is interior designed.
- 5) On Screen Display function is interior designed.
- 6) Package : 100PIN QFP
- 7) Tuner (Pre-scaler) : IIC BUS  
/PLL IC : TAU 6014-S (SIEMENS)
- 8) REMOCON : The IC of transmission (MITSUBISHI M50560)
- 9) EEPROM : 24AT08 (IIC BUS)
- 10) 10-Local Key : A/D input control  
(KEY 0 : REC, REW, PLAY, FF, STOP/EJECT)  
(KEY 1 : POWER, CH UP/DOWN, VOL UP/DOWN)
- 11) Option S/W : Port A/D input Option check
- 12) IF/V/C/D IC : DCT814B (LA76814B)
- 13) VCR Y/C/A IC : LA71550M
- 14) DECK MECHANISM : K-MECHA

## IC DESCRIPTION

### 2. PIN DESCRIPTION

Pin	Terminal	Name	Explanation	Remarks
1	P11(0)	KEY 1 IN	Power, Ch up/down, Vol up/down	
2	P7(7)	AGC IN	Connect this port to AGC of Tuner. Default voltage :3.75V Variable voltage : 3.25V, 3.5V, 3.75V	
3	P7(6)	OPTION	H(5V) : Parental control M(2.5V) : Child lock L(0V) : None	
4	P7(5)	DRUM SELECT	H(5V) : NTSC 4 head L(0V) : NTSC 2 head	
5	P7(4)	PATH ADJUST	Automatic PATH adjust	
6	P7(3)	VIDEO ENVELOPE IN	Connect this port to 6 pin of IZ01. Maximum point search DC ENVE input. Auto tracking restart condition (SP:2.5V, LP/SLP:1.5-5V)	
7	P7(2)	END SENSOR IN	Tape END sensor detect input. H: Tape end.	
8	P7(1)	START SENSOR IN	Tape START sensor detect input. H: Tape start.	
9	P7(0)	POWER SAFETY IN	Connect this port to 26V of FBT. FBT protect port. Detect voltage: 3V under → Hold down	
10	P6(7)	AFT IN	DC voltage that comes from the 10 pin of DCT814B	
11	P6(6)	CAPSTAN I LIMIT OUT	Limit the current of CAPSTAN MOTOR Set "L" during PAUSE/STILL	
12	P6(5)		Not used	
13	P6(4)	QV SYNC	When special play, Quasi Vertical SYNC insert V SYNC of C.V.S	Special play: QUE,REV, STILL,SLOW
14	P6(3)	REMOCON INPUT	Remote Controller pulse input	
15	P6(2)	COLOR ROTARY OUT	When color MOD/DEMOD, phase shift pulse	
16	P6(1)	HEAD AMP SW PULSE	4 head option. When special play, EP head switching pulse	
17	P6(0)	COMPARATOR ENV	4 head option.	
18	P5(7)	V HEAD SW PULSE	Video head switching pulse(SP head).	
19	P5(6)	A HEAD SW PULSE	6 head option. Not used	
20	P5(5)	REC H	When recording, set "H"	
21	P5(4)	TRICK H	When special play, set "H"	
22	P5(3)	CASSETTE DOWN H	When cassette insert, light up IR led.	
23	P5(2)	CAPSTAN F/R	Switching forward(H) and reverse(L) of CAPSTAN MOTOR	
24	P5(1)	CRT ON L	When CRT off, set "H" during 1sec.	
25	P5(0)	SOUND MUTE H	When stand by TV/VCR, set speaker sound mute.	

Pin	Terminal	Name	Explanation	Remarks
26	P4(7)	AUDIO MUTE H	Connect this port to 95 pin of ICY01. When special play, set audio mute.	
27	P4(6)		Not used	
28	P4(5)	REC LED H	Light up LED(RED) when recording	
29	P4(4)	TIMER REC LED H	Light up LED(GREEN) when ready to programming record.	
30	P4(3)	MONITOR ON H	When CRT on, set "H".	
31	P4(2)	VCR ON H	Recording when CRT off, set "H"	
32	P4(1)	RELAY ON H	When CRT on, relay on during 1sec.	
33	P4(0)		Not used	
34	RESET	RESET(L)	RESET	
35	P3(1)	Xcin	It uses 32.768KHz Crystal. 35 pin is input terminal for crystal oscillator	
36	P3(0)	Xcout	36 pin is output terminal for crystal oscillator	
37	Vcc	Vcc	Ever +5V( $\pm 0.5V$ ). Positive power supply	
38	Xin	Xin	It uses 16MHz Crystal. 38 pin is input terminal for crystal oscillator	
39	Xout	Xout	39 pin is output terminal for crystal oscillator	
40	Vss	Vss	GND Negative power supply.	
41	P2(2)	OSCin3	Not used	
42	P2(1)	OSCout3	Not used	
43		CLK SELECT	When MICOM to start, decide to 32.768KHz or 16MHz. Set "L" : 32.768KHz	
44	P2(0)	OSCin2	It uses LC oscillator. Set the OSD position.	
45	P1(7)	OSCout2	38 pin is input terminal for LC oscillator 39 pin is output terminal for LC oscillator	
46	NUB	NUB	GND	
47	P1(6)	LP H	Not used	
48	P1(5)	FSC IN	Not used	
49	Vcc	OSD Vss	GND	
50	P1(4)	CVS IN	Not used	
51	P1(3)	LECHA	Not used	
52	P1(2)		Not used	
53	Vcc	OSD Vcc	Ever +5V ( $\pm 0.5V$ ).	
54	P1(1)	FILTER	Filter terminal for PLL.	
55	P1(0)	SLD FILTER	Filter terminal for SYNC separate.	
56	P0(7)	C.V.S IN	For Caption and Parental control signal detect.	
57	NUA	NUA	GND	
58	P0(6)	H SYNC IN	For OSD horizontal SYNC input	
59	P0(5)	V SYNC IN	For OSD vertical SYNC input	

## IC DESCRIPTION

Pin	Terminal	Name	Explanation	Remarks																																			
60	P0(4)	OSD BLANK OUT	Fast blanking control signal. Switch TV image signal and Caption/OSD image signal.																																				
61	P0(3)		Not used																																				
62	P0(2)	OSD B OUT	Blue output terminal of OSD image.																																				
63	P0(1)	OSD G OUT	Green output terminal of OSD image.																																				
64	P0(0)	OSD R OUT	Red output terminal of OSD image.																																				
65	P10(7)	S DATA	IIC data I/O. Control VCR Y/C, TUNER, EEPROM																																				
66	P10(6)		Not used																																				
67	P10(5)	S CLOCK	IIC clock output																																				
68	P10(4)	CAP PG mon	Not used																																				
69	P10(3)	DRUM PG mon	Not used																																				
70	P10(2)	DRUM FG mon	Not used																																				
71	P10(1)	M CLOCK	IIC clock output																																				
72	P10(0)	M DATA	IIC data I/O. Control CHROMA IC																																				
73	P9(7)	LD F/R	Loading Motor Forward(L)/Reverse(H)																																				
74	P9(6)	LD ON	When operate Loading Motor, set "H"																																				
75	P9(5)	PWM2	Not used																																				
76	P9(4)	CAPSTAN PWM	Control rotate speed of Capstan Motor. Period of PWM : 23.4KHz																																				
77	P9(3)	DRUM PWM	Control rotate speed of Drum Motor. Period of PWM : 23.4KHz																																				
78	P9(2)	POWER FAIL	Input "L", MICOM is Hold mode. Backup time approx. 30minute.																																				
79	P9(1)	RLS IN	Supply reel/Take up reel pulse input terminal. Use to check the Tape remain or high speed rewind and fast forward.																																				
80	P9(0)	RLT IN																																					
81	P8(7)	CAM D	CAM detection input terminal. <table border="1"> <thead> <tr> <th>MODE</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>EJECT</td> <td>L</td> <td>H</td> <td>H</td> <td>H</td> </tr> <tr> <td>STAND BY</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> </tr> <tr> <td>REV</td> <td>H</td> <td>H</td> <td>L</td> <td>H</td> </tr> <tr> <td>STOP</td> <td>H</td> <td>H</td> <td>H</td> <td>L</td> </tr> <tr> <td>PLAY</td> <td>H</td> <td>H</td> <td>H</td> <td>L</td> </tr> <tr> <td>FF/REW</td> <td>H</td> <td>L</td> <td>H</td> <td>L</td> </tr> </tbody> </table>	MODE	A	B	C	D	EJECT	L	H	H	H	STAND BY	L	H	L	H	REV	H	H	L	H	STOP	H	H	H	L	PLAY	H	H	H	L	FF/REW	H	L	H	L	
MODE	A	B	C	D																																			
EJECT	L	H	H	H																																			
STAND BY	L	H	L	H																																			
REV	H	H	L	H																																			
STOP	H	H	H	L																																			
PLAY	H	H	H	L																																			
FF/REW	H	L	H	L																																			
82	P8(6)	CAM C																																					
83	P8(5)	CAM B																																					
84	P8(4)	CAM A																																					
85	P8(3)		Not used																																				
86	P8(2)	REC SAFETY SW L	Recordable tape insert, "L" input. If "H" input when insert cassette tape, then automatic play.																																				
87		CAP PG IN	Capstan Pulse Generator signal input. Feed back Capstan rotation speed.																																				
88	Vss	AMPVss	GND																																				

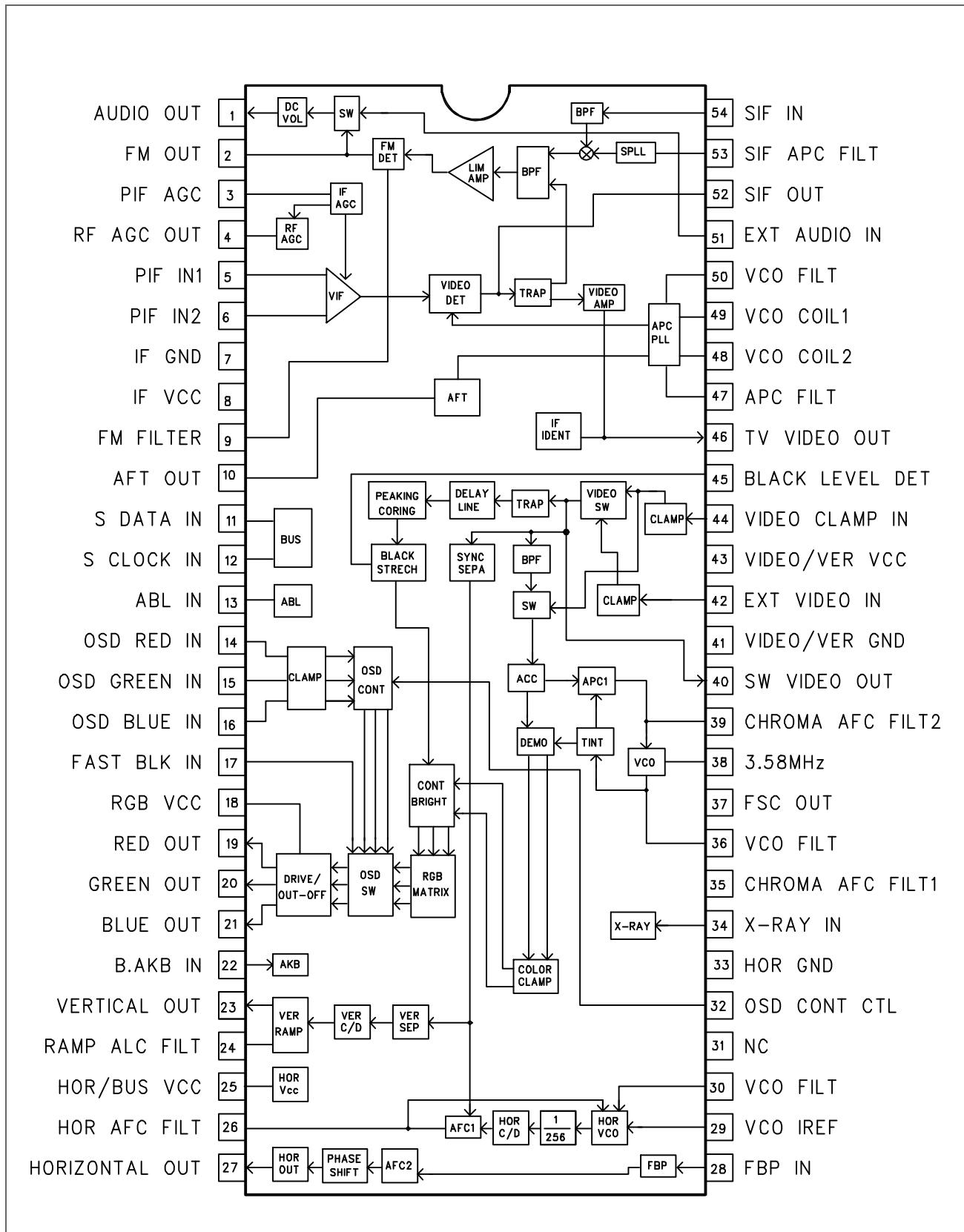
## IC DESCRIPTION

Pin	Terminal	Name	Explanation	Remarks
89	P8(1)	DRUM FG IN	Drum Frequency Generator signal input. Feed back Drum rotation speed.	
90		DRUM PG IN	Drum Pulse Generator signal input. Feed back Drum rotation phase.	
91		AMP REF IN	Control pulse AMP reference input terminal.	
92		AMP REF OUT	Control pulse AMP reference output terminal.	
93	P8(0)	C	AMP filter.	
94		CTL-	Input control pulse when playing.	
95		CTL+	Output control pulse when recording.	
96		AMP C	AMP condenser.	
97		CTL AMP OUT	Check Control pulse.	
98	Vcc	AMP Vcc	Ever +5V ( $\pm 0.5V$ ).	
99	Vcc	ANALOG Vcc	Ever +5V ( $\pm 0.5V$ ).	
100	P11(1)	KEY 0 IN	REC, REW, PLAY, FF, STOP/EJECT	

## IC DESCRIPTION

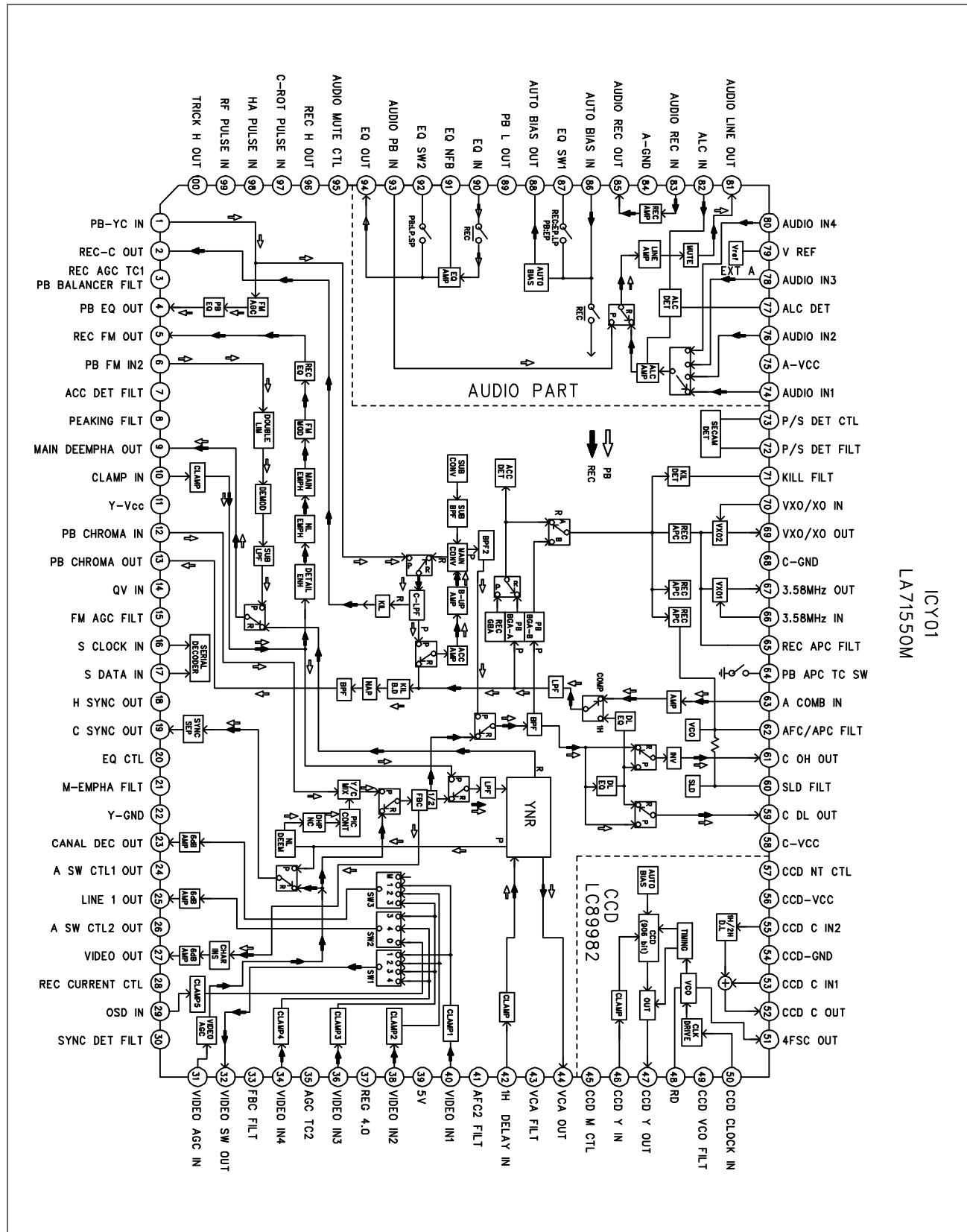
IC501

DCT814B(LA76814B) : IC VIDEO PROCESSOR



ICY01

LA71550M : IC VCR Y/C &amp; AUDIO PROCESSOR

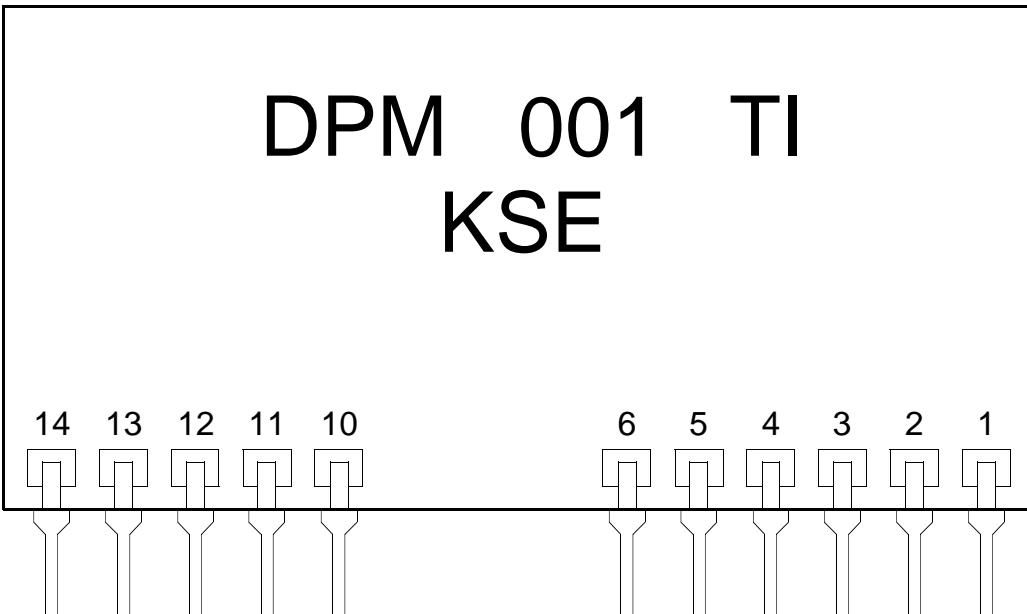


## IC DESCRIPTION

I801

POWER CONTROL MODULE

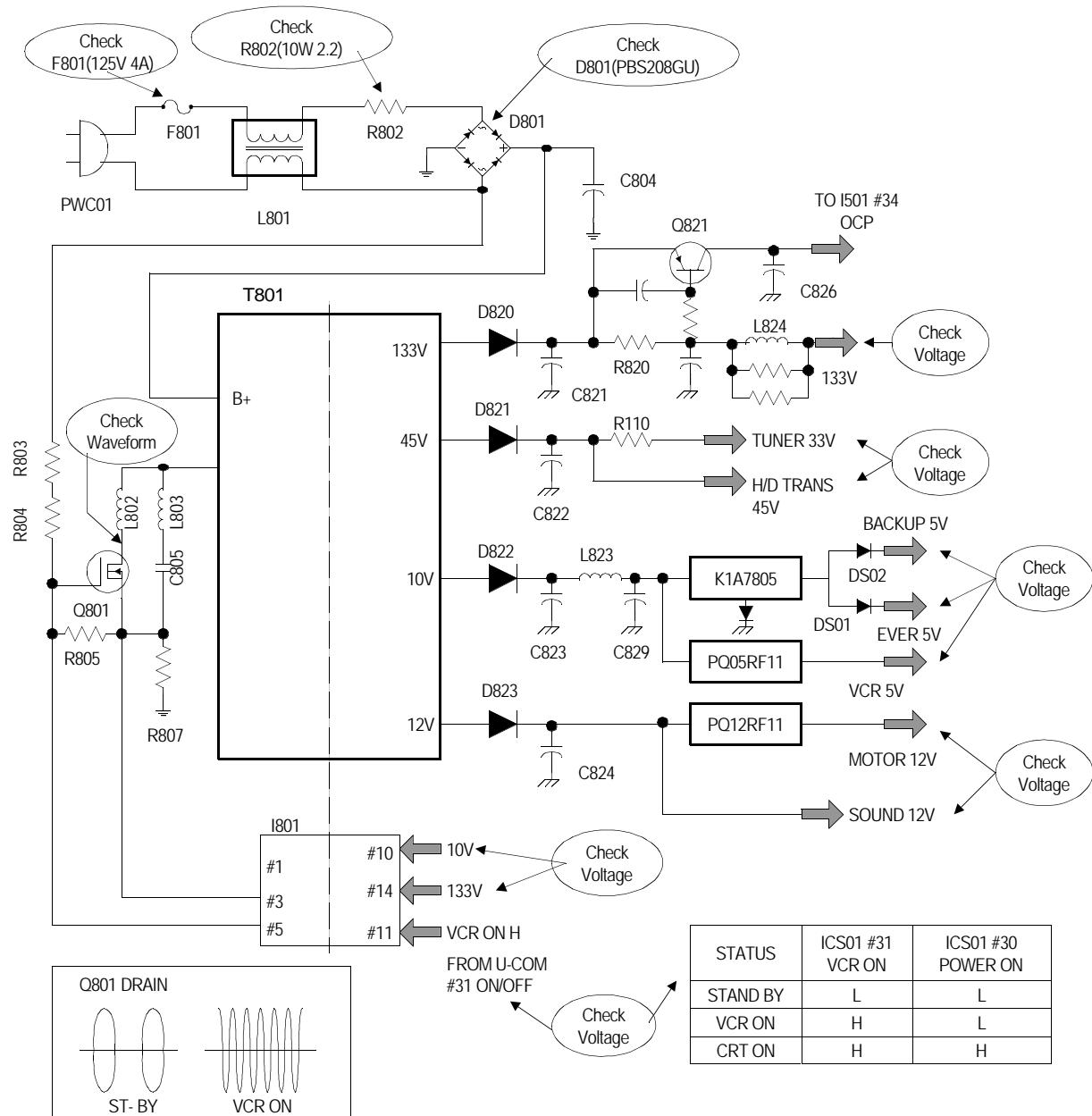
DPM 001 TI  
KSE



PIN NO	DESCRIPTION	PIN NO	DESCRIPTION
1	GATE DRIVE1	10	+12V INPUT
2	OCP	11	POWER CONTROL
3	SOURCE	12	+26 OUTPUT
4	GND1	13	GND2
5	GATE	14	+133V INPUT
6	GATE DRIVE2		

# TROUBLESHOOTING GUIDE

## 1. NO POWER



## TROUBLESHOOTING GUIDE

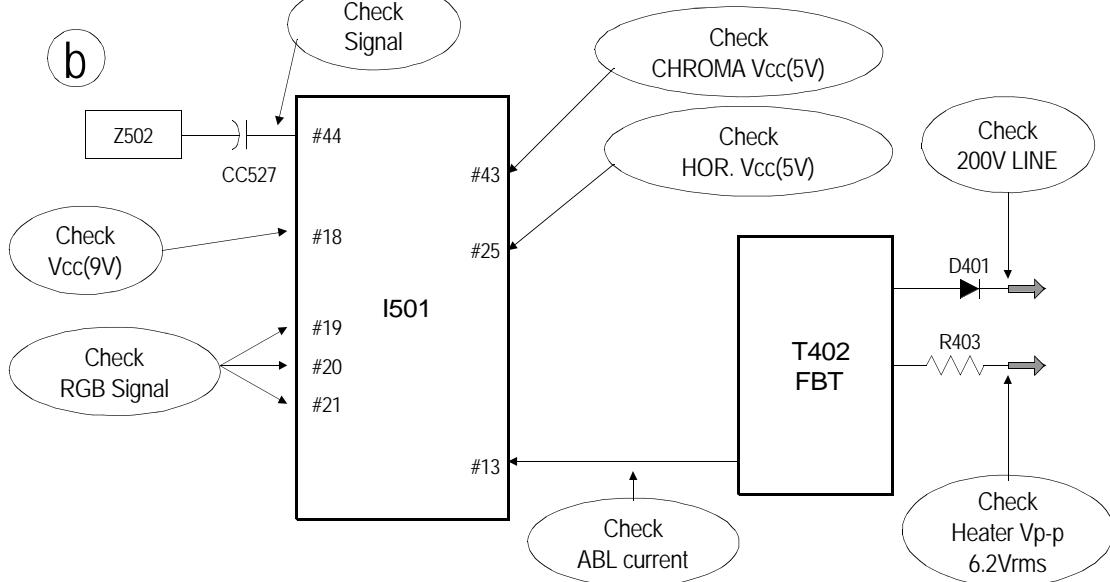
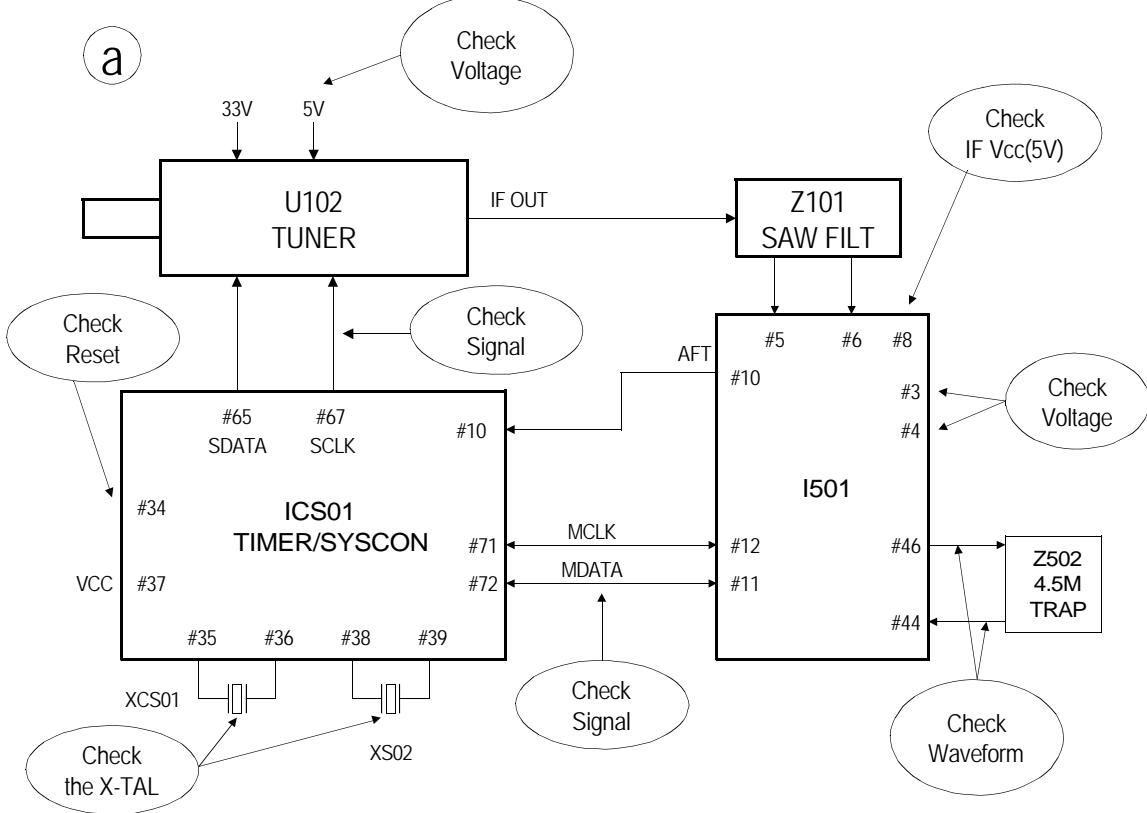
### 2. TV PART

#### 2-1) NO PICTURE

Check the waveform of I501 #46

NG : GO to the figure (a)

OK : GO to the figure (b)

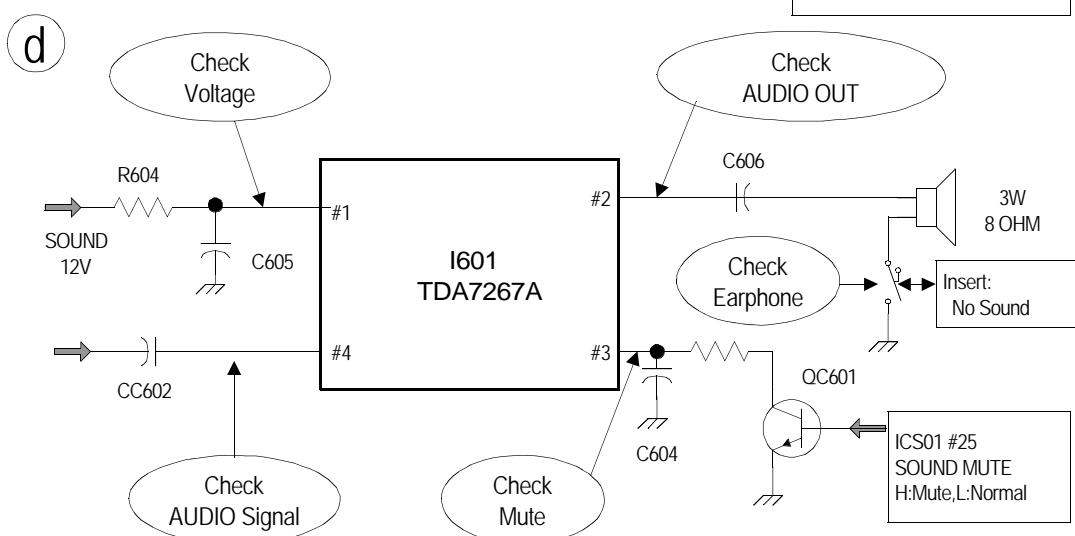
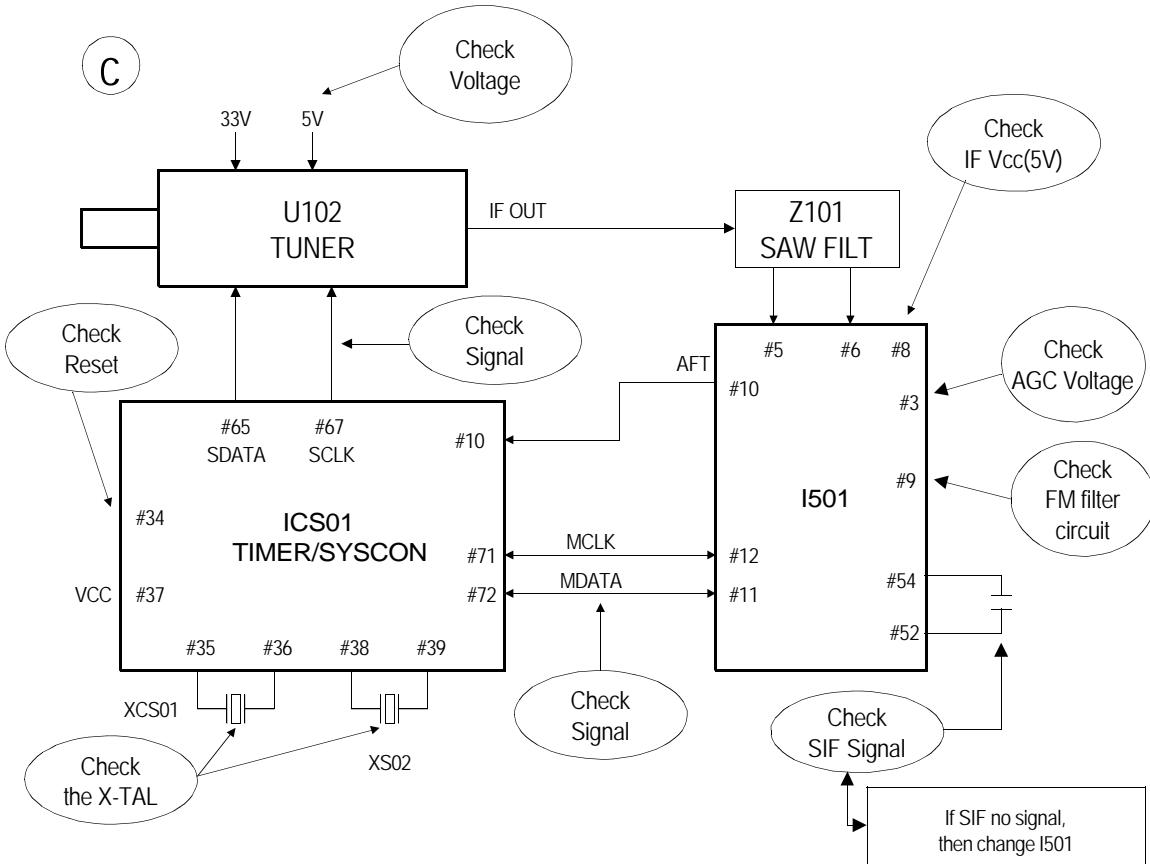


2-2) NO SOUND

Check the waveform of I501 #1

NG : GO to the figure (c)

OK : GO to the figure (d)



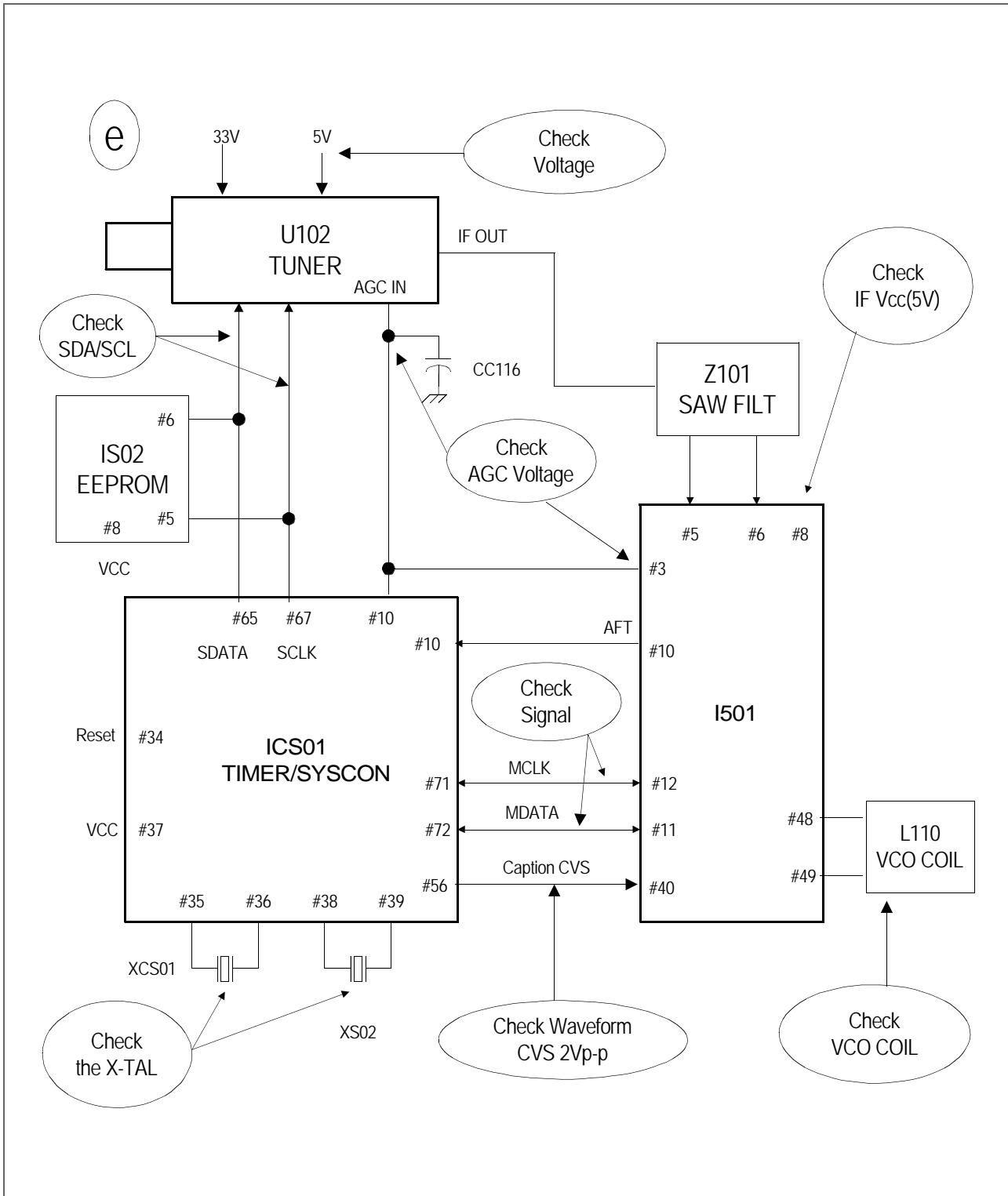
## TROUBLESHOOTING GUIDE

### 2-3) CHANNEL DON'T STOP

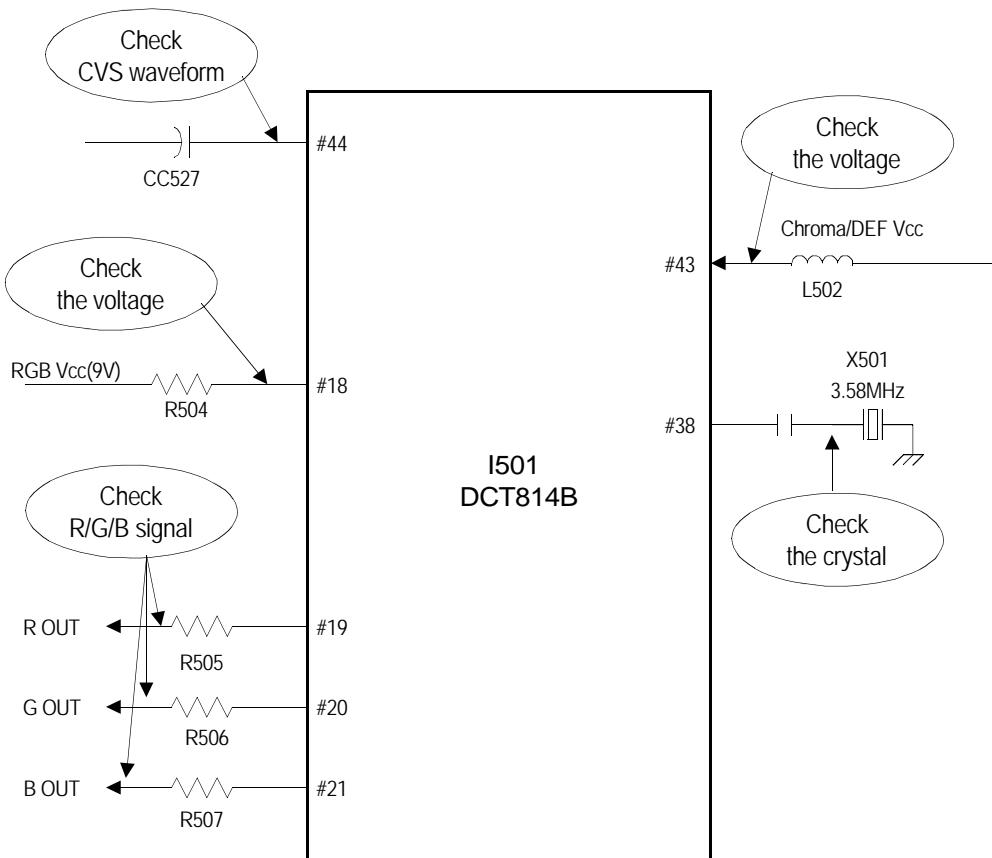
Check the input signal conditions.

NG : Loss of signal or weak signal

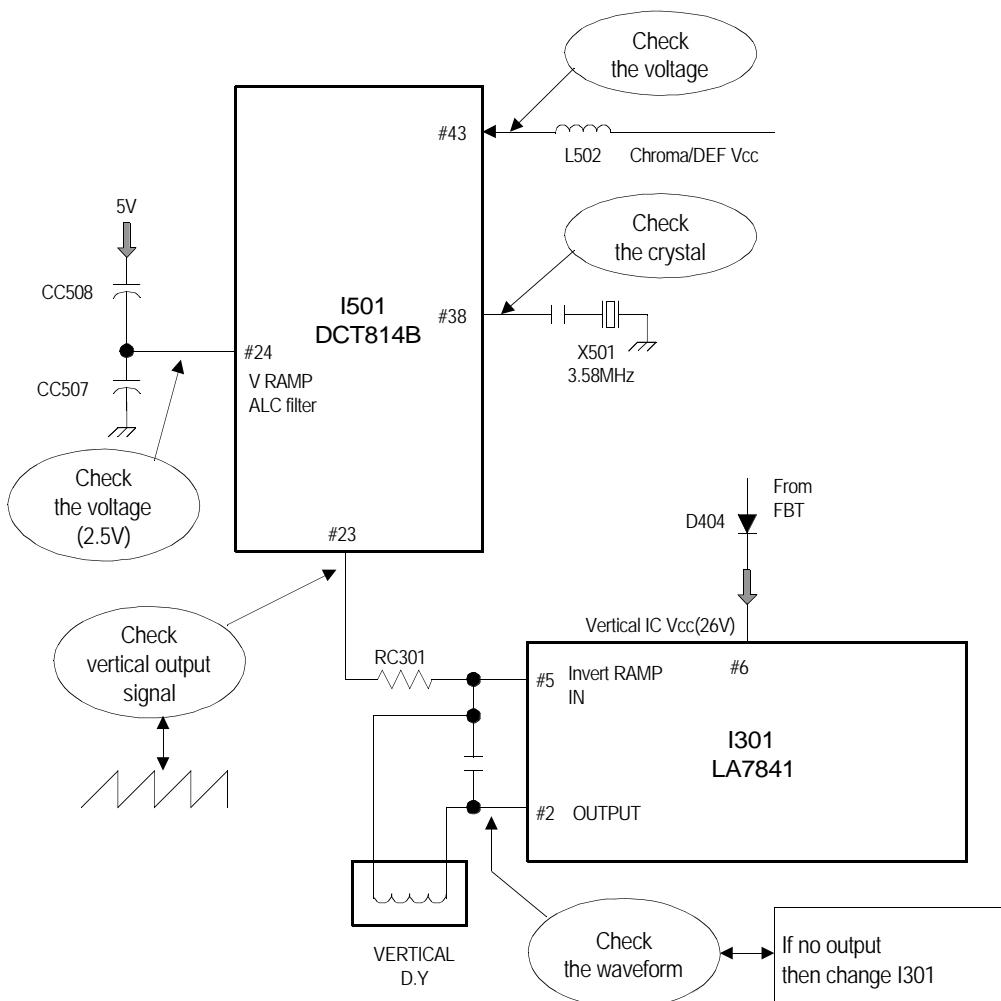
OK : GO to the figure (e)



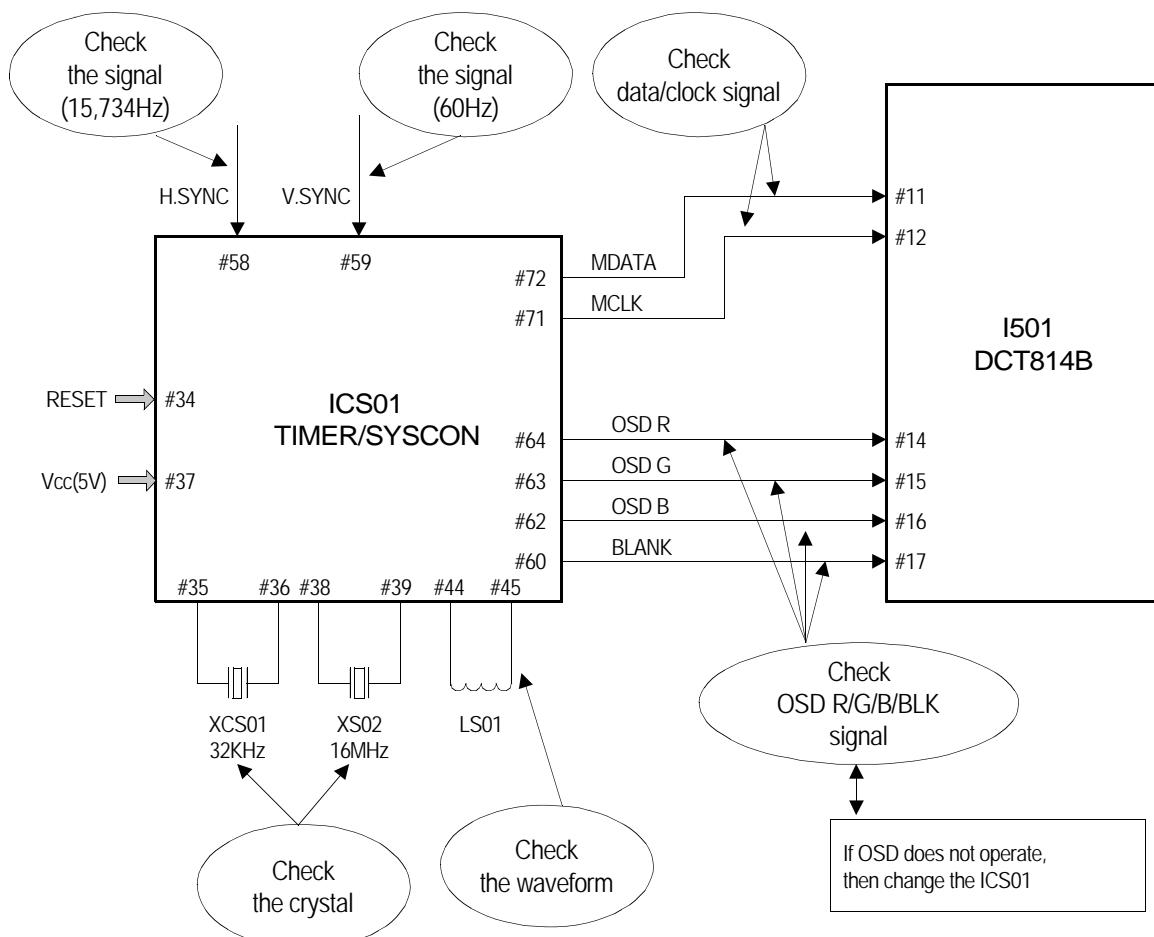
2-4) NO COLOR



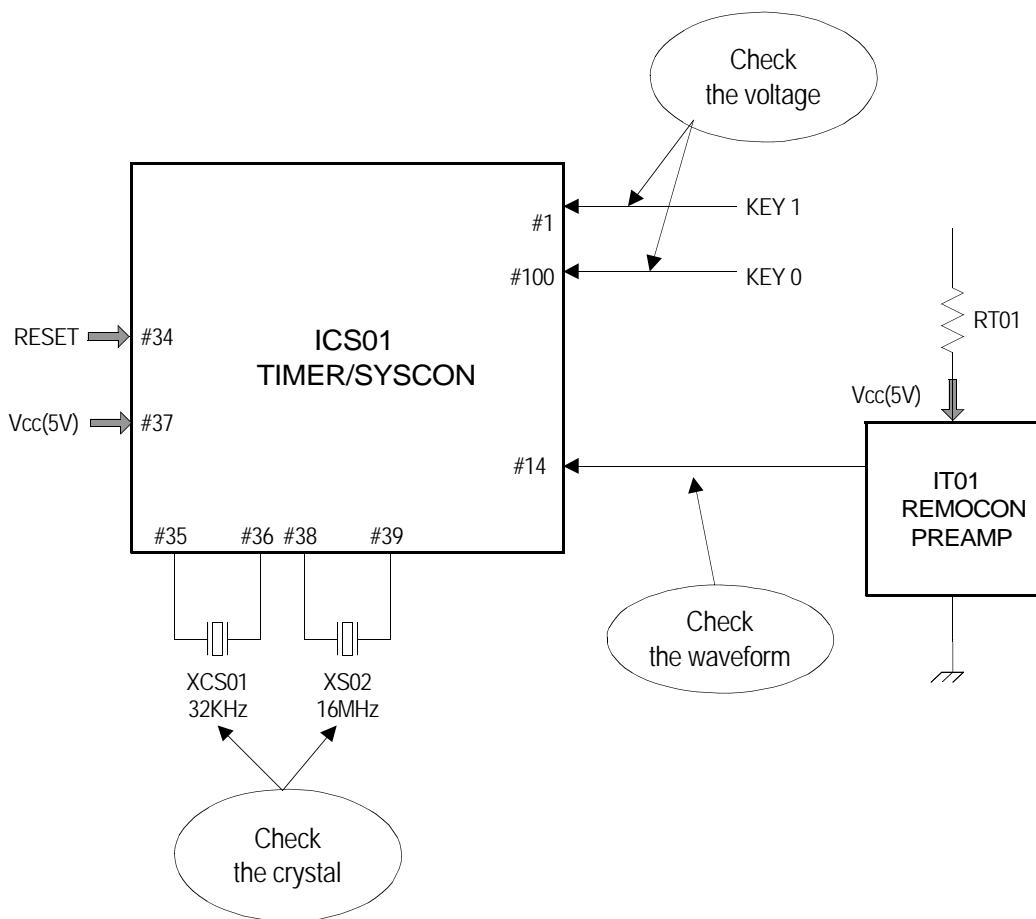
2-5) NO VERTICAL DEFLECTION



## 2-6) NO ON-SCREEN DISPLAY



2-7) REMOTE CONTROL DOES NOT OPERATE



### 3. VCR PART

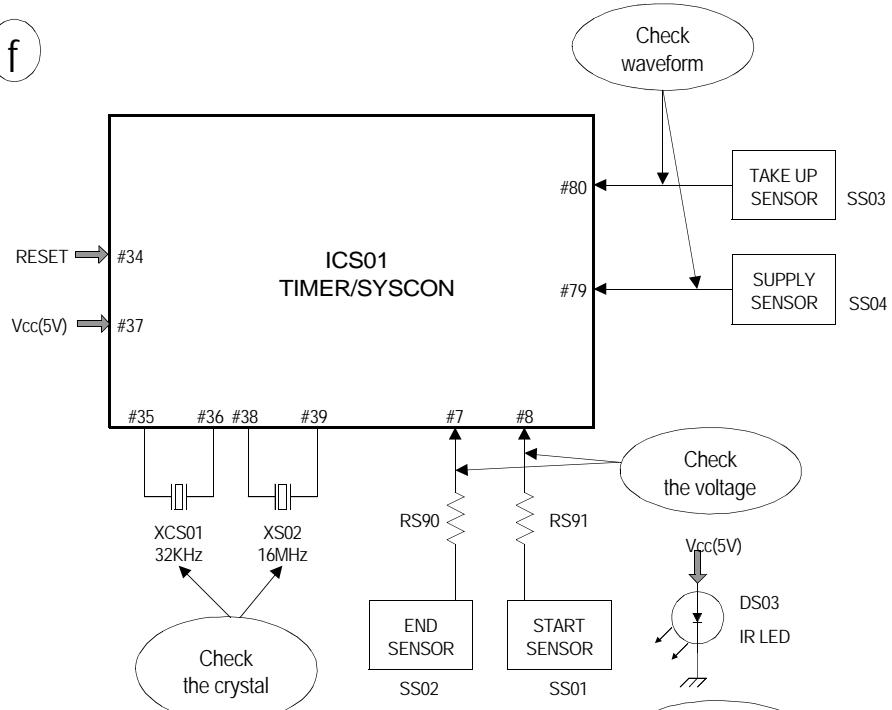
#### 3-1) NO LOADING

Check the loading conditions (VHS TAPE)

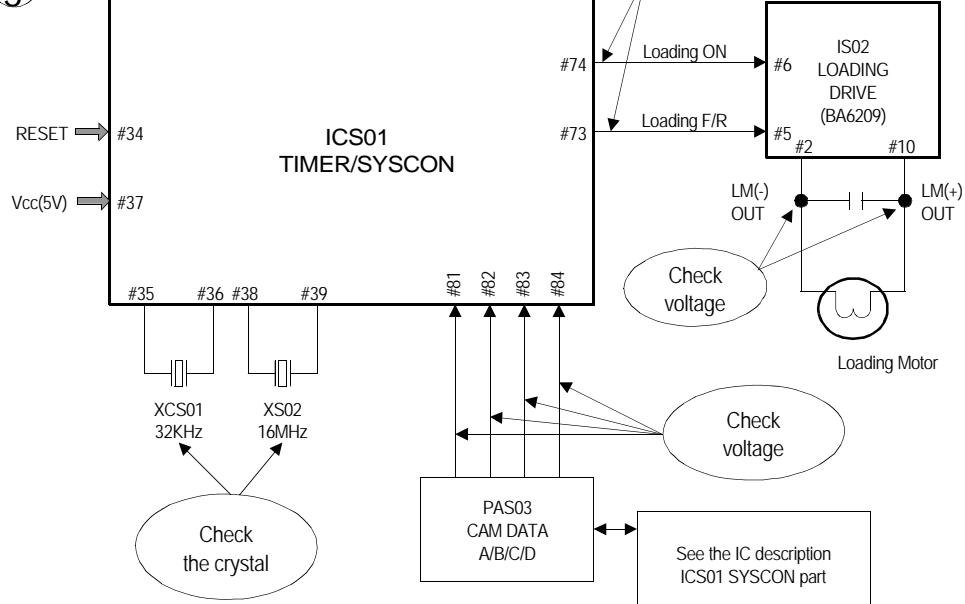
EJECT : GO to the figure (f)

UNLOADING : GO to the figure (g)

(f)



(g)



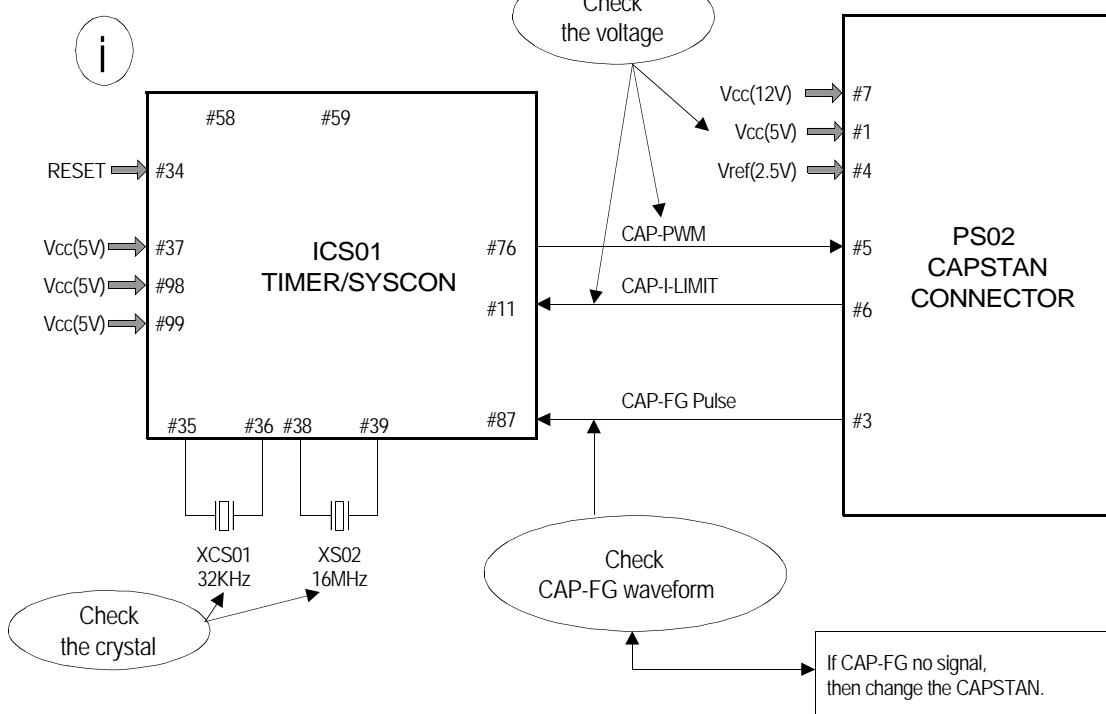
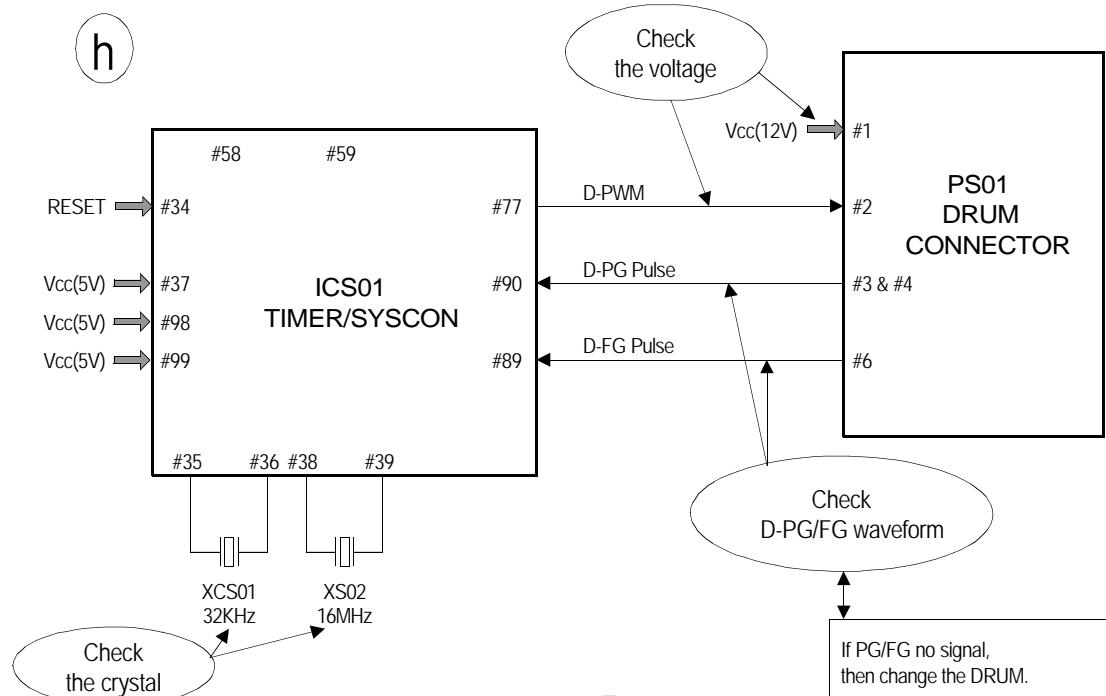
## TROUBLESHOOTING GUIDE

### 3-2) NO ROTATING

Check the Rotating

DRUM : GO to the figure (h)

CAPSTAN : GO to the figure (i)

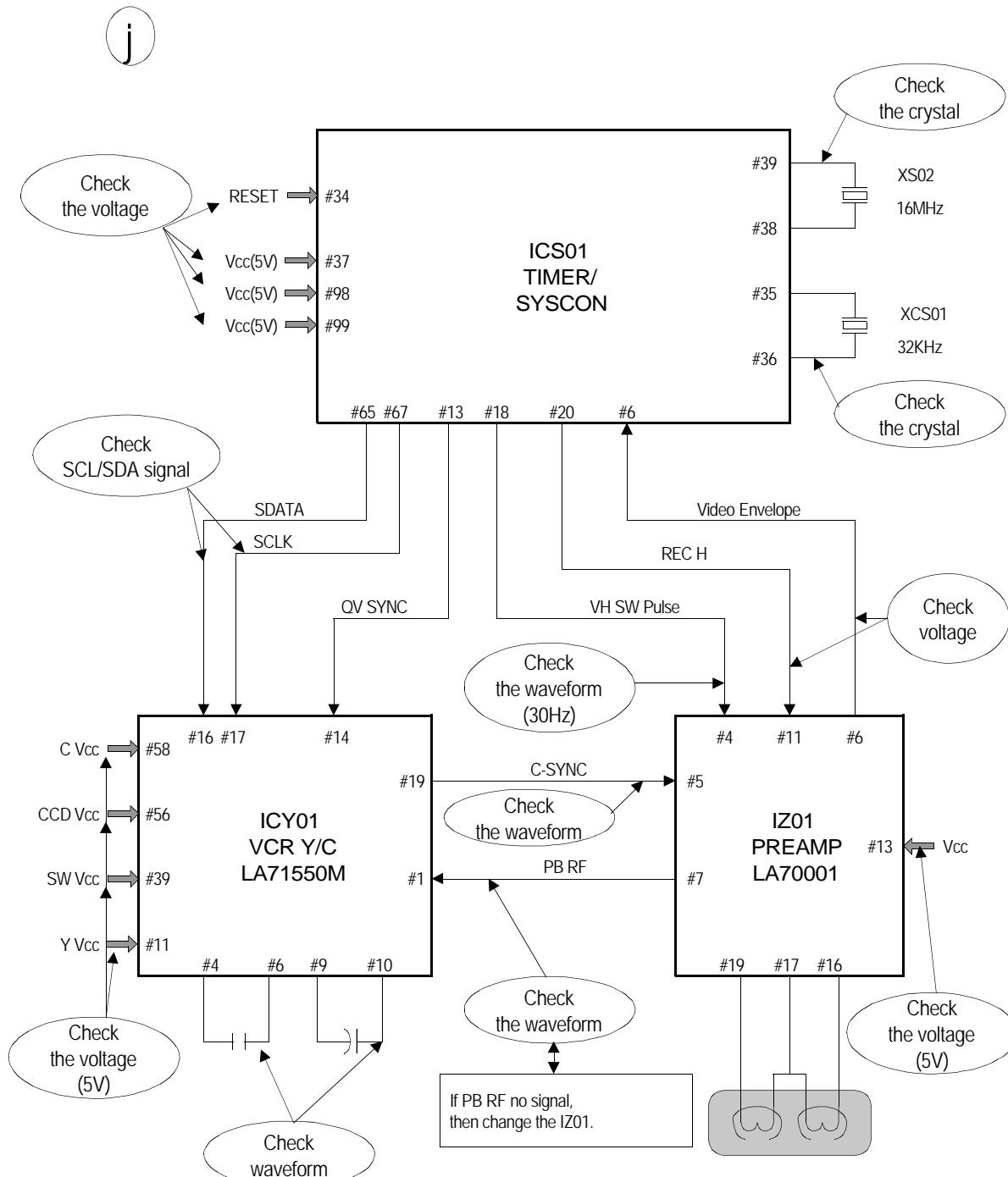


## 3-3) NO PICTURE PLAYBACK

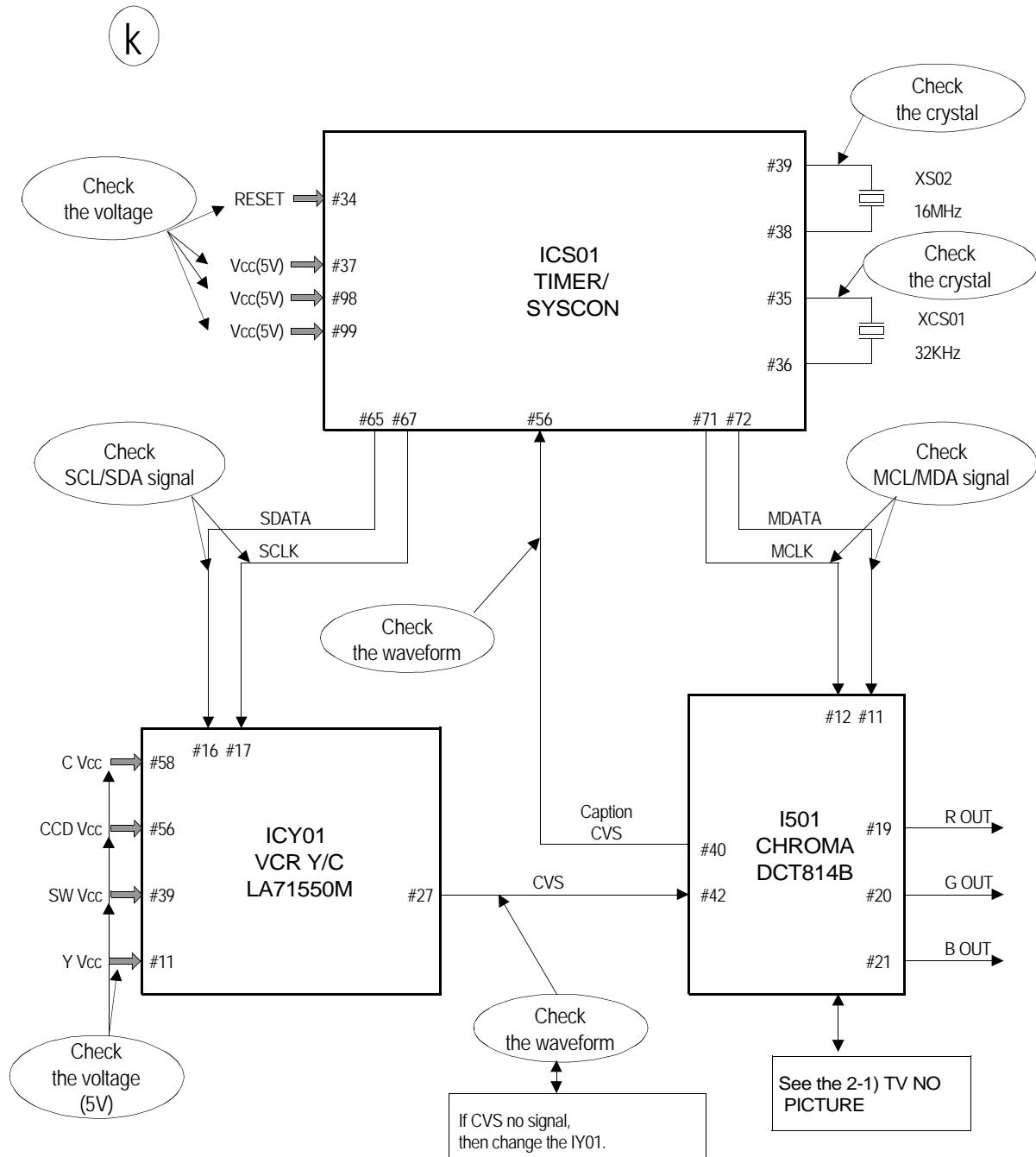
Check the waveform of ICY01 #27

NG : GO to the figure (j)

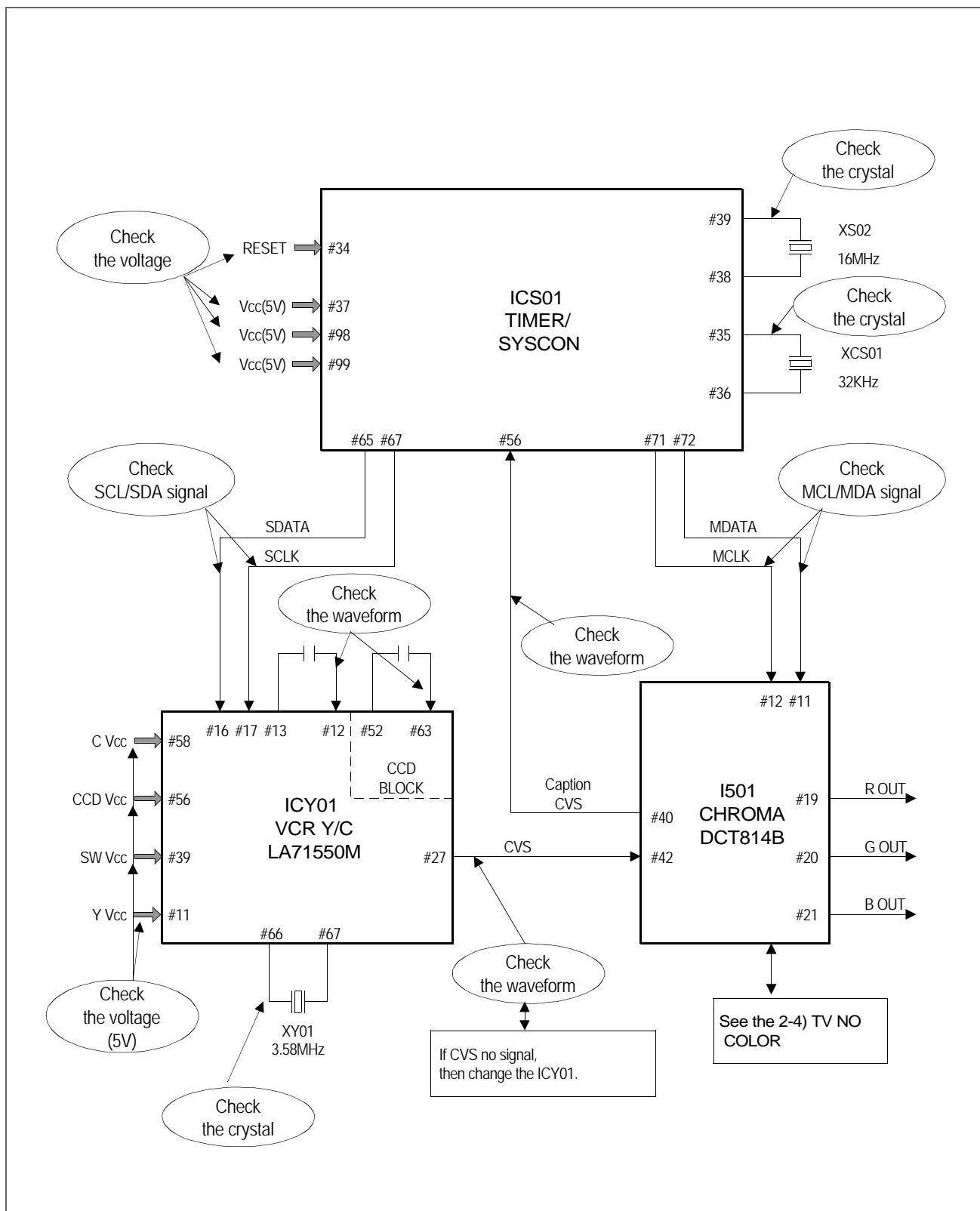
OK : GO to the figure (k)



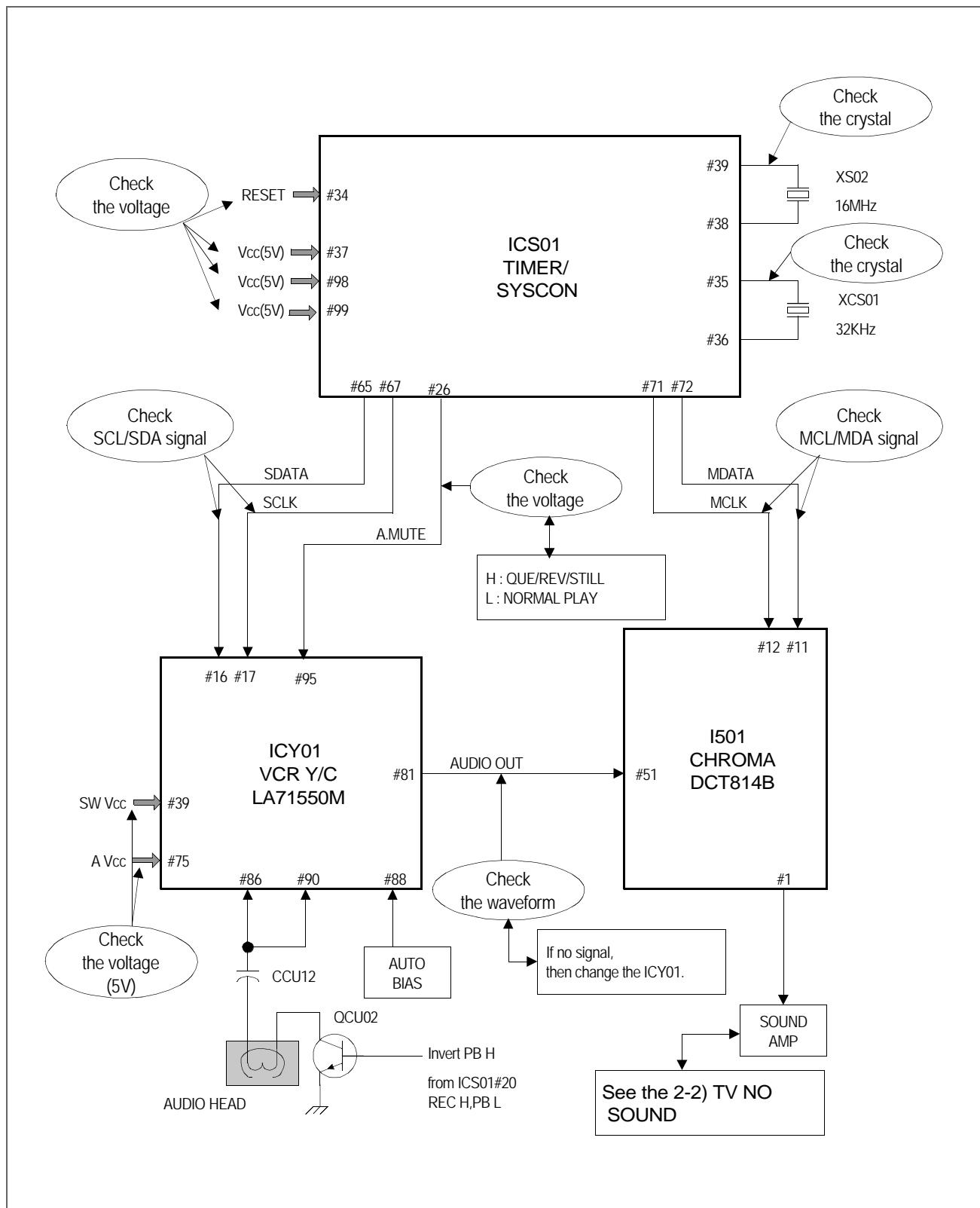
## TROUBLESHOOTING GUIDE



## 3-4) NO COLOR PLAYBACK



3-5) NO SOUND PLAYBACK

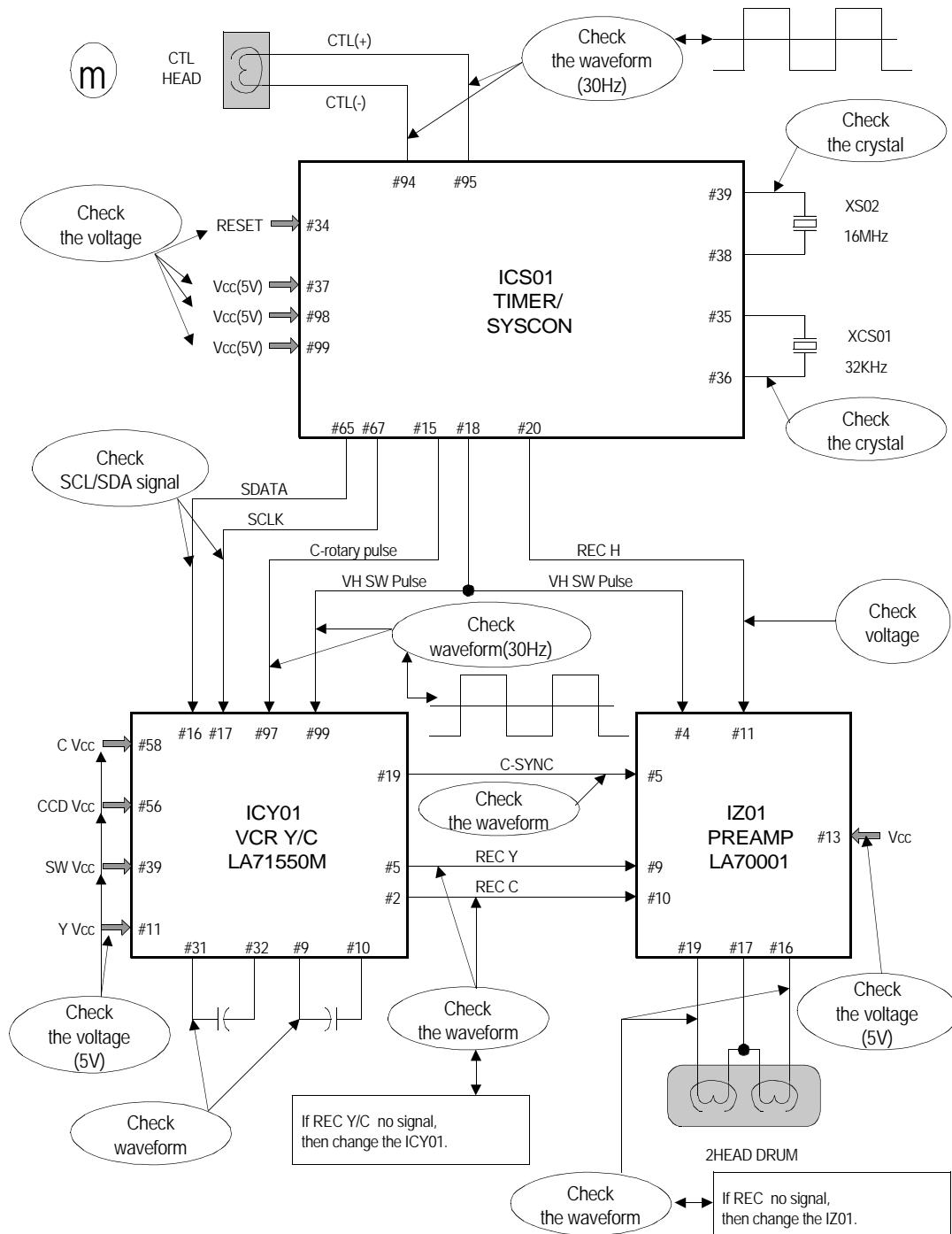


3-6) NO RECORD PICTURE

Check the waveform of ICY01 #40

NG : GO to the figure 2-1 (TV PART)

OK : GO to the figure (m)



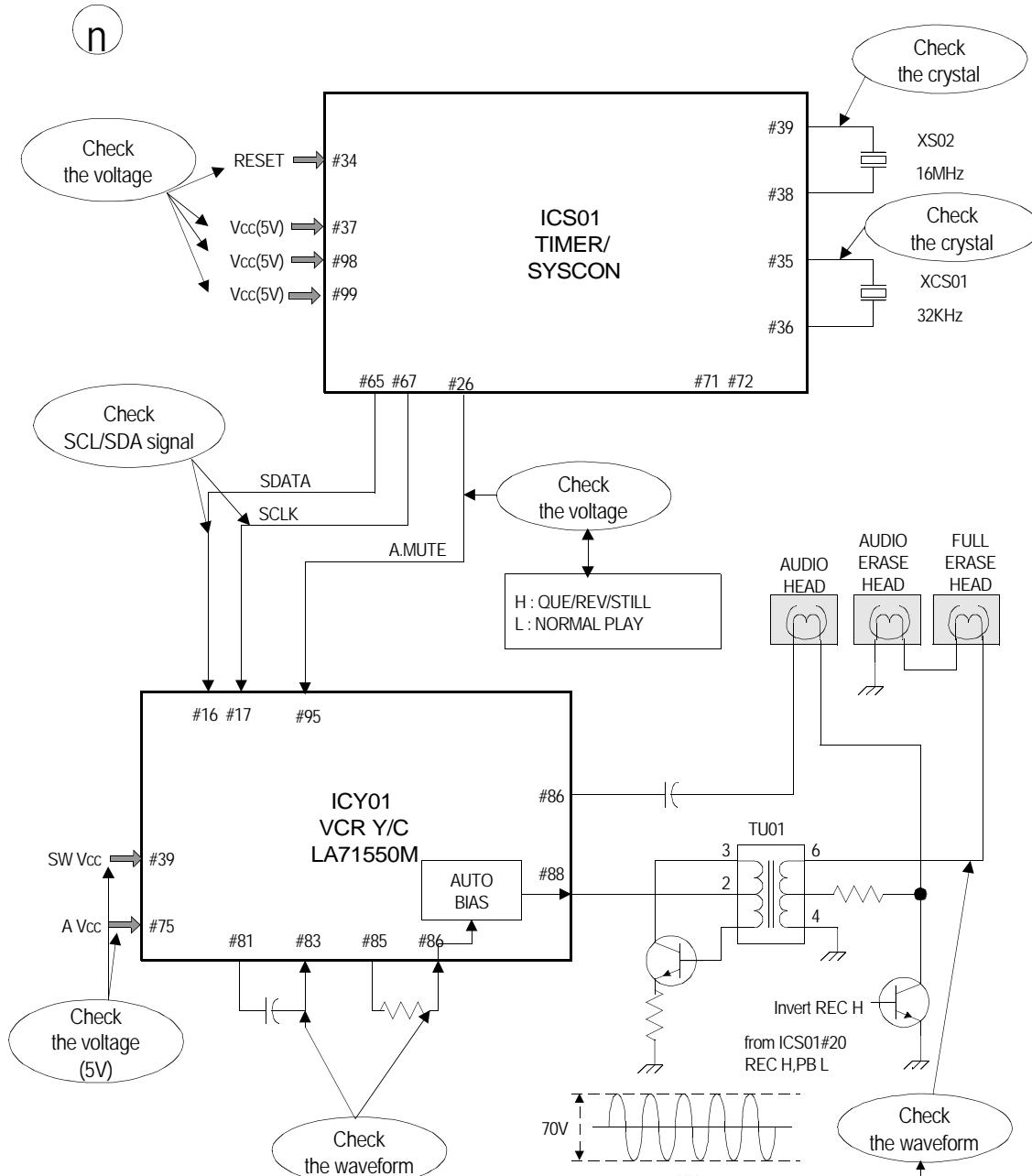
## TROUBLESHOOTING GUIDE

### 3-7) NO RECORD SOUND

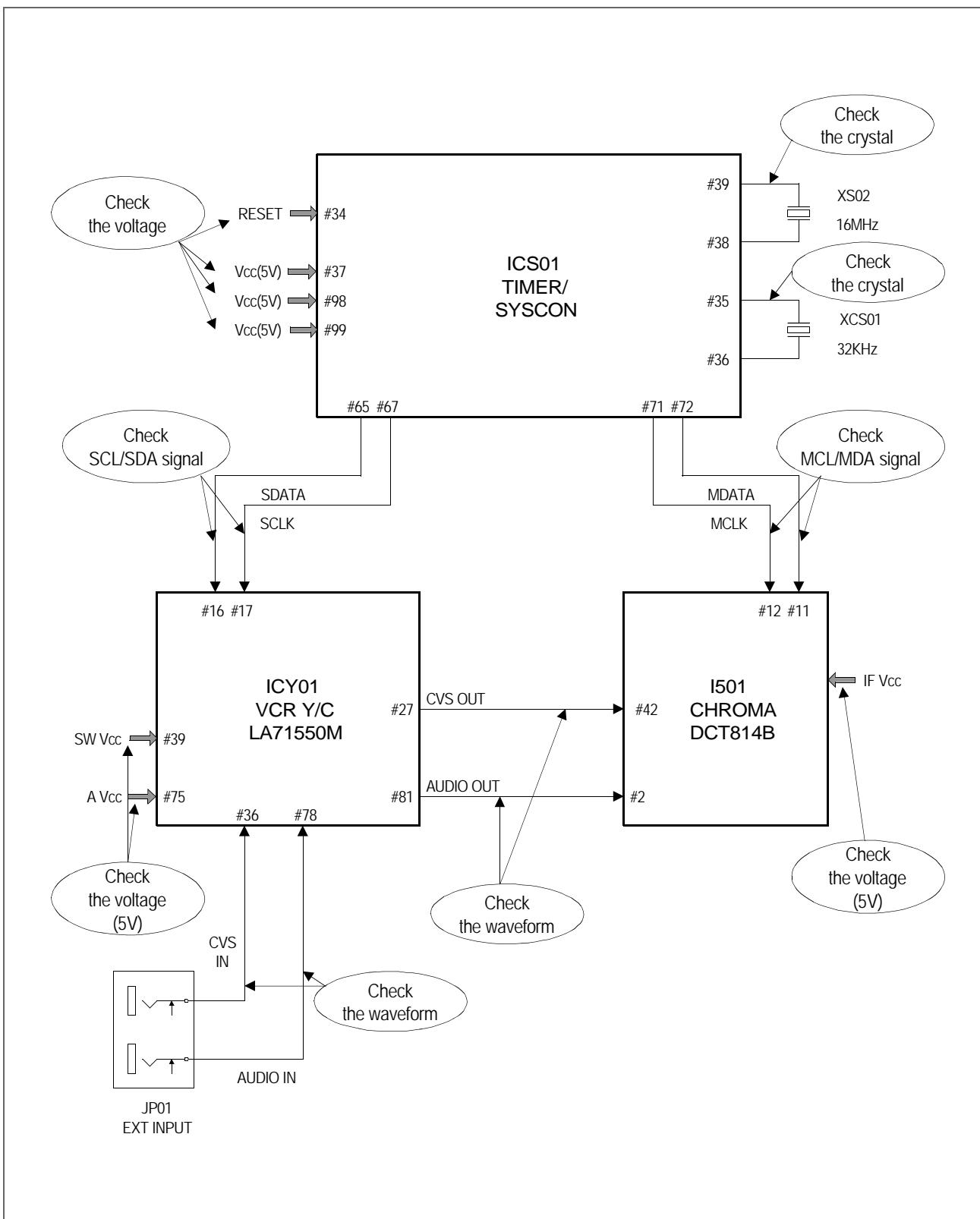
Check the waveform of ICY01 #74

NG : GO to the figure ②-2 (TV PART)

OK : GO to the figure ⑨



3-8) NO EXTERNAL VIDEO / AUDIO



# ELECTRICAL PARTS LIST

## CAUTION

“” is safety component, so it must be used the same component.

## DVQ-19H1FC

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
ZZ100	48B4139A02	TRANSMITTER REMOCON	R-39A02	M201	4852070100	MASK FRONT	FR HIPS BK
ZZ110	PTACPWJ690	ACCESSORY AS	DVQ-20H1FC	ZZ202	PTSPPWJ690	SPEAKER AS	DVQ-20H1FC
20	486A716200	BATTERY	AAAM 1.5V	PA601	4850703S50	CONNECTOR	YH025-03+35098+ULW-200
40	485860710	MANUAL INSTRUCTION	DVQ-14/20H1FC	SP01	4858314310	SPEAKER	SP-5070A01 3W 8 OHM
M821	4858213800	BAG INSTRUCTION	L.D.P.E T0.05X250X400	SP01A	4851935501	SPKR BRKT AS	3951901+3952500
ZZ120	PTBCSHJ690	COVER BACK AS	DVQ-20H1FC	SP01B	4856013600	SCREW SPKR FIX	SWRM+SECC
M211	4852153100	COVER BACK	FR HIPS BK	ZZ290	PTMPMSJ690	PCB MAIN MANUAL AS	DVQ-20H1FC
M541	4855415800	SPEC PLATE	150ART P/E FILM (C/TV)	A001	4859812892	PCB MAIN	330X246 S1B
M781	4857817610	CLOTH BLACK	FELT 300X20X0.7	C101	CMXB1H103J	C MYLAR	50V EU 0.01MF J (TP)
M782	4857817630	CLOTH BLACK	FELT 400X20X0.7	C102	CMXB1H333J	C MYLAR	50V EU 0.033MF J (TP)
M783	4857817621	CLOTH BLACK	CLOTH T0.7 L=60	C105	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP
ZZ130	PTPKCPJ690	PACKING AS	DVQ-20H1FC	C117	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
M801	4858038300	BOX CARTON	DW-3 2086	C121	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP
M801A	6520010100	STAPLE PIN	18M/M J D O	C301	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
M811	4858189500	PAD	EPS 20H1	C302	CEXF1V101V	C ELECTRO	35V RSS 100MF (8X11.5) TP
M822	4858215000	BAG P.E	FOAM LEX 0.5T*1200*1150	C303	CXSL2H100D	C CERA	500V SL 10PF D (TAPPING)
 ZZ131	48519A5110	CRT GROUND NET	2001S-1015-1P	C304	CMXB1H103J	C MYLAR	50V EU 0.01MF J (TP)
ZZ132	58G0000122	COIL DEGAUSSING	DC-2030	C305	CMXB1H104J	C MYLAR	50V EU 0.1MF J (TP)
 CRT1	PTRTPWJ690	CRT AS	NTSC 20''' ITC CRT AS	C308	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
 V01	58D0000083	COIL DY	ODY-M2050	C309	CMXL1H105J	C MYLAR	50V MEU 1MF J
V02	2233030001	PAINT LOCK	3B-1401B	C310	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
V03	2TC26019BE	TAPE CLOTH	19X30 BEIGE	C401	CEYF2D101V	C ELECTRO	200V RSS 100MF (16X31.5)
V04	2224050025	BOND SILICON	RTV 122 TUBE	C402	CMYH3C622J	C MYLAR	1.6KV BUP 6200PF J
V05	4850PM001-	MAGNET CP	NY-225 (MINI NECK)	C403	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
V06	48A96R004-	RUBBER WEDGE	HMR 28 SR (J0X54)	C404	CEXF2E100V	C ELECTRO	250V RSS 10MF (10X20) TP
V901	48A96420N1	CRT BARE	A48JLL40X(W)	C405	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
M193	4851936800	BUTTON CTRL	4942001+5538301	C406	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
M193A	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK	C407	CEXF1C222V	C ELECTRO	16V RSS 2200MF (13X25) TP
M201A	4856013300	SCREW CRT FIXING	30X80 BK	C408	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
M201B	4856013302	SCREW CRT FIXING	30X190 BK	C409	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
M201C	4856215402	WASHER RUBBER	CR T2.0	C410	CEXF1V471C	C ELECTRO	35V RUS 470MF (10X20) TP
M211A	7122401611	SCREW TAPPING	T2S TRS 4X16 MFZN	C411	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7
M281	4852817720	DOOR F/L	ABS BK SILK	C412	CCYB2H103K	C CERA	500V B 0.01MF K
M481	4854854701	BUTTON POWER	ABS BK	C413	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
M671	4856723400	SPRING	SWPB 0.4	C415	CEXF2C109V	C ELECTRO	160V RSS 1MF (6.3X11) TP
M672	4856715600	SPRING	SWPA PIE 0.4	C416	CMYF2D624J	C MYLAR	200V MPP 0.62MF J
M681	97P4602700	CLAMP CORD	NYLON 66 BLK 5280N	C505	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
ZZ200	PTFMSJJ690	MASK FRONT AS	DVQ-20H1FC	C509	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
C512	CMXB1H333J	C MYLAR	50V EU 0.033MF J (TP)	CC118	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C518	CMXB1H473J	C MYLAR	50V 0.047MF J (TP)	CC119	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C525	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP	CC120	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C604	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP	CC122	HCTAJ228MB	C CHIP TANTAL	35V 0.22MF M 3216
C605	CEXF1E331V	C ELECTRO	25V RSS 330MF (10X12.5)TP	CC123	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C606	CEXF1E471V	C ELECTRO	25V RSS 470MF (10X16) TP	CC130	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
⚠ C801	CL1JB3474K	C LINE ACROSS	AC250V 0.47MF U/C/SNDF/SV	CC131	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
⚠ C802	CCXB2H222K	C CERA	500V B 2200PF K (TAPPING)	CC501	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
⚠ C803	CCXB2H222K	C CERA	500V B 2200PF K (TAPPING)	CC502	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C804	CEYN2E221P	C ELECTRO	250V LHS 220MF (22X30)	CC503	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C805	CMYU3A472J	C MYLAR	1KV BCP 4700PF J	CC506	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C820	CCXB3D471K	C CERA	2KV B 470PF K (TAPPING)	CC507	HCTAJ228MB	C CHIP TANTAL	35V 0.22MF M 3216
C821	CEYF2D101V	C ELECTRO	200V RSS 100MF (16X31.5)	CC508	HCTAJ228MB	C CHIP TANTAL	35V 0.22MF M 3216
C822	CEXF2A100V	C ELECTRO	100V RSS 10MF (6.3X11) TP	CC510	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C823	CEXF1C102C	C ELECTRO	16V RUS 1000MF (10X20) TP	CC511	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
C824	CEXE1E102E	C ELECTRO	25V RM 1000MF (10X20) TP	CC513	HCQK181JCA	C CHIP CERA	50V CH 180PF J 2012
C825	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP	CC516	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
C826	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	CC517	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
C827	CEXF1C331V	C ELECTRO	16V RSS 330MF (8X11.5) TP	CC519	HCTAJ478MB	C CHIP TANTAL	35V 0.47MF M 3216
C828	CEXE1A222E	C ELECTRO	10V RM 2200MF (10X20) TP	CC521	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012
C829	CEXF1C222V	C ELECTRO	16V RSS 2200MF (13X25) TP	CC522	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
C830	CEXF1C102C	C ELECTRO	16V RUS 1000MF (10X20) TP	CC524	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C831	CCXB3A471K	C CERA	1KV B 470PF K (T)	CC526	HCTAF229MB	C CHIP TANTAL	16V 2.2MF M 3216
C832	CCXB3A471K	C CERA	1KV B 470PF K (T)	CC527	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
C833	CCXB3A471K	C CERA	1KV B 470PF K (T)	CC528	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
C834	CMXB1H104J	C MYLAR	50V EU 0.1MF J (TP)	CC529	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
C835	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP	CC532	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
⚠ C888	CH1BFE472M	C CERA AC	AC400V 4700PF M U/C/V	CC551	HCQK221JCA	C CHIP CERA	50V CH 220PF J 2012
C901	CMXL2E104K	C MYLAR	250V MEU 0.1MF K	CC553	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
C902	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)	CC601	HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
C965	CCYB3D102K	C CERA	2KV B 1000PF K	CC602	HCTAJ108MB	C CHIP TANTAL	35V 0.1MF M 3216
CC103	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CC603	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC104	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CC836	HCTAD479MB	C CHIP TANTAL	10V 4.7MF M 3216
CC106	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	CCS01	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC107	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCS02	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC108	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012	CCS03	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC109	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012	CCS04	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC110	HCTAJ478MB	C CHIP TANTAL	35V 0.47MF M 3216	CCS05	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC111	HCTAJ108MB	C CHIP TANTAL	35V 0.1MF M 3216	CCS06	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC112	HCTAF229MB	C CHIP TANTAL	16V 2.2MF M 3216	CCS07	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC113	HCQK809DCA	C CHIP CERA	50V CH 8PF D 2012	CCS08	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC114	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCS09	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC115	HCBK152KCA	C CHIP CERA	50V X7R 1500PF K 2012	CCS10	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC116	HCTAF229MB	C CHIP TANTAL	16V 2.2MF M 3216	CCS11	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
CCS12	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCU04	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS13	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCU05	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS14	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	CCU06	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528
CCS16	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCU07	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS18	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012	CCU09	HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
CCS19	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012	CCU10	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS20	HCQK240JCA	C CHIP CERA	50V CH 24PF J 2012	CCU11	HCQK821JCA	C CHIP CERA	50V CH 820PF J 2012
CCS21	HCQK240JCA	C CHIP CERA	50V CH 24PF J 2012	CCU12	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS24	HCQK240JCA	C CHIP CERA	50V CH 24PF J 2012	CCU13	HCBK152KCA	C CHIP CERA	50V X7R 1500PF K 2012
CCS25	HCQK240JCA	C CHIP CERA	50V CH 24PF J 2012	CCU19	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS27	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCU20	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS29	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCU21	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS30	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	CCU22	HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
CCS31	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012	CCU24	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS32	HCQK201JCA	C CHIP CERA	50V CH 200PF J 2012	CCU25	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS34	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012	CCU26	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
CCS35	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012	CCY01	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS36	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012	CCY02	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS37	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012	CCY03	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
CCS38	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY04	HCQK270JCA	C CHIP CERA	50V CH 27PF J 2012
CCS40	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012	CCY05	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS41	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012	CCY06	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
CCS42	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	CCY07	HCQK390JCA	C CHIP CERA	50V CH 39PF J 2012
CCS43	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY08	HCQK201JCA	C CHIP CERA	50V CH 200PF J 2012
CCS44	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY09	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
CCS45	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY10	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528
CCS46	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY11	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS47	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY12	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS48	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012	CCY13	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS49	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012	CCY14	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CCS50	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012	CCY15	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CCS51	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528	CCY16	HCQK391JCA	C CHIP CERA	50V CH 390PF J 2012
CCS52	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528	CCY17	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CCS53	HCQK391JCA	C CHIP CERA	50V CH 390PF J 2012	CCY18	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS54	HCQK391JCA	C CHIP CERA	50V CH 390PF J 2012	CCY19	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
CCS57	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216	CCY20	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS59	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528	CCY21	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS60	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY22	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528
CCS61	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY23	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528
CCS63	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY24	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCS64	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY25	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216
CCS70	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	CCY26	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CCU01	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012	CCY27	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
CCU02	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CCY28	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
CCY29	HCTAD100MB	C CHIP TANTAL	10V 10MF M 3216	CU15	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
CCY30	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	CU16	CMXM2A333J	C MYLAR	100V 0.03MF J (TP)
CCY31	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012	CU17	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
CCY32	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CU18	CMXM2A223J	C MYLAR	100V 0.022MF J TP
CCY33	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CY37	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP
CCY34	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	CZ06	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP
CCY35	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D101	DUZ33B----	DIODE ZENER	UZ-33B
CCY36	HCTBC470MB	C CHIP TANTAL	6.3V 47MF M 3528	D301	D1N4003---	DIODE	1N4003 (TAPPING)
CCY38	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D302	DUZ33B----	DIODE ZENER	UZ-33B
CCY39	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D303	DUZ33B----	DIODE ZENER	UZ-33B
CCY40	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	D401	D1N4937G--	DIODE	1N4937G
CCY41	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D402	D1N4937G--	DIODE	1N4937G
CCY42	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012	D403	D1N4937G--	DIODE	1N4937G
CCY43	HCTAF339MB	C CHIP TANTAL	16V 3.3MF M 3216	D404	D1N4937G--	DIODE	1N4937G
CCY44	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012	D406	D1N4937G--	DIODE	1N4937G
CCY45	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012	D501	D1N4148---	DIODE	1N4148 (TAPPING)
CCY46	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	D504	DUZ9R1BM-	DIODE ZENER	UZ-9.1BM 9.1V
CCY47	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012	D551	D1N4148---	DIODE	1N4148 (TAPPING)
CCY48	HCBK472KCA	C CHIP CERA	50V X7R 4700PF K 2012	D552	D1N4148---	DIODE	1N4148 (TAPPING)
CCY49	HCQK330JCA	C CHIP CERA	50V CH 33PF J 2012	D553	D1N4148---	DIODE	1N4148 (TAPPING)
CCY50	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	▲ D801	DPBS208GU	DIODE BRIDGE	PBS208GU-CA (FORMING)
CCY51	HCQK509DCA	C CHIP CERA	50V CH 5PF D 2012	D820	DRGP30J---	DIODE	RGP30J
CCY52	HCQK100DCA	C CHIP CERA	50V CH 10PF D 2012	D821	D1N4937G--	DIODE	1N4937G
CCY53	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D822	DD2S4M----	DIODE	D2S4M
CCY54	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D823	DD2S4M----	DIODE	D2S4M
CCZ02	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012	D824	DUZ9R1BM-	DIODE ZENER	UZ-9.1BM 9.1V
CCZ03	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D825	DRZ1175V1-	DIODE	RZ1175V1
CCZ04	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D826	D1N4148---	DIODE	1N4148 (TAPPING)
CCZ05	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D827	DUZ15BM---	DIODE ZENER	UZ-15BM
CCZ07	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	D828	D1N4148---	DIODE	1N4148 (TAPPING)
CCZ08	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216	D829	D1N4003---	DIODE	1N4003 (TAPPING)
CCZ09	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012	DS01	D1N4003---	DIODE	1N4003 (TAPPING)
CCZ10	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	DS02	D1N4003---	DIODE	1N4003 (TAPPING)
CS15	CDYE0H104A	C SUPER	5.5V 0.1F DA	DS03	DS15312H--	LED IR	SI5312-H
CS17	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP	DS03A	97P2339600	HOLDER IR	ABS
CS28	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP	DS04	DUZ6R2BM-	DIODE ZENER	UZ-6.2BM 6.2V
CS33	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)	DS05	DUZ5R1BM-	DIODE ZENER	UZ-5.1BM
CS39	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP	DS07	D1N4148---	DIODE	1N4148 (TAPPING)
CS62	CEXF1E331V	C ELECTRO	25V RSS 330MF (10X12.5)TP	DT01	DKLR114L--	LED	KLR114L
CS65	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP	DT02	DSR54MVW3-	LED	SPR54 MVW RED/GREEN
CS66	CEXF1E331V	C ELECTRO	25V RSS 330MF (10X12.5)TP	DT03	DUZ5R6BM-	DIODE ZENER	UZ-5.6BM(TAPPING)
CT01	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP	DT04	DUZ5R6BM-	DIODE ZENER	UZ-5.6BM(TAPPING)
CU03	CEXF1C101A	C ELECTRO	16V RSM 100MF (6.3X7) TP	▲ F801	5F1GB4021L	FUSE GLASS TUBE	UL/CSA TL 4A 125V MF51
CU14	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP	F801A	4857415001	CLIP FUSE	PFC5000-0702

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
F801B	4857415001	CLIP FUSE	PFC5000-0702	JC16-JC17	HRF8000-EA	R CHIP	1/8 0 OHM 3216
I301	1LA7841---	IC VERTICAL	LA7841	JC19-JC21	HRF8000-EA	R CHIP	1/8 0 OHM 3216
I301	PTB2SW7100	HEAT SINK ASS'Y	1LA7841--- + 7174300811	JP01	4859109950	JACK PIN BOARD	PH-JB-9710A
I301A	4857027100	HEAT SINK	SPCC T1.0+SN	L101	5CPX560J--	COIL PEAKING	56UH J (RADIAL)
I301B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	L102	58C5580019	COIL CHOKE	TRF-9225 (0.55UH)
I501	1DCT814B--	IC CHROMA	DCT814B	L103	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
I601	1TDA7267A-	IC AMP	TDA7267A	L110	58N0000042	COIL VCO	TRF-V008
⚠ I801	4850M04310	MODULE POWER	DPM001T1	L401	58C0000026	COIL BEAD	HC-4035
I803	PTX2SW6900	HEAT SINK ASS'Y	1K1A7805P1 + 7174301011	L501	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
I803	1K1A7805P1	IC REGULATOR	KIA7805P1	L502	5CPZ470K04	COIL PEAKING	47UH 10.5MM K (LAL04TB)
I803A	4857026900	HEAT SINK	AL EX	L503	5CPZ150K02	COIL PEAKING	15UH K (AXIAL 3.5MM)
I803B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN	⚠ L801	5PLF24A1--	FILTER LINE	LF-24A1
I804	PTB2SW4617	HEAT SINK ASS'Y	1PQ05RF11/12 + 7174300811	L802	5MC0000100	COIL BEAD	HC-3550
I804	1PQ05RF11-	IC REGULATOR	PQ05RF11	L803	5MC0000100	COIL BEAD	HC-3550
I804A	4857024617	HEAT SINK	AL EX	L804	58Q0000093	COIL DELAY LINE	RS208
I804B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	L820	5MC0000100	COIL BEAD	HC-3550
I805	1PQ12RF11-	IC REGULATOR	PQ12RF11	L821	5MC0000100	COIL BEAD	HC-3550
I805A	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	L823	58CX430599	COIL CHOKE	AZ-9004Y 940K TP
I901	PTG1SW8902	HEAT SINK ASS'Y	1TDA6103Q- + 7174300811	L824	58CX430599	COIL CHOKE	AZ-9004Y 940K TP
I901	1TDA6103Q-	IC VIDEO	TDA6103Q	LS01	5CPZ159M02	COIL PEAKING	1.5UH 3.5MM M (LAL02TB)
I901A	4857018902	HEAT SINK	A1050P-H24	LS02	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
I901B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	LS03	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
ICS01	1DW760AA1Q	IC CHIP MICOM	DW37760MCA-AA1	LU01	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
ICY01	1LA71550-Q	IC CHIP Y/C	LA71550	LU02	5CPX101J--	COIL PEAKING	PL 100UH J (TAPPING)
IS02	1BA6209---	IC	BA6209(ROHM)	LU03	5CPX103J--	COIL PEAKING	10MH 5MM J RADIAL
IS03	1AT24C08PC	IC	AT24C08-10PC	LY01	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
IS04	1MN1380L--	IC COMPARATOR(RESET)	MN1380-L(RESET IC)	LY02	5CPZ560K02	COIL PEAKING	56UH K (AXIAL 3.5MM)
IS05	1MN1280R--	IC	MN1280R	LY03	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
IT01	1KRT30----	IC PREAMP	KRT30	LY04	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
IZ01	1LA70001--	IC PREAMP	LA70001 (2HD)	LY05	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
J001-J079	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	LZ01	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
J081-J099	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	M191	4851931700	DECK AS	DRN-7203
J103-J113	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	M192	4851923500	SHIELD CASE AS	DVN-14F7JA
J115-J188	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	M194	4851937000	SHIELD TOP AS	7246200+7246300
JG01-JG02	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	M231	97P2316600	HOLDER AC CORD	NYLON66 UL/CSA
JG04	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	M351	4853535200	HOLDER LED	FR HIPS BK
JC01-JC02	HRF8000-EA	R CHIP	1/8 0 OHM 3216	M381	4853817200	FRAME MAIN PCB	FR HIPS BK
JC04	HRFT000-CA	R CHIP	1/10 0 OHM 2012	M381A	7122401611	SCREW TAPPING	T2S TRS 4X16 MFZN
JC05-JC09	HRF8000-EA	R CHIP	1/8 0 OHM 3216	M381B	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
JC10	HRFT000-CA	R CHIP	1/10 0 OHM 2012	M381C	7121301212	SCREW TAPPING	T2S PAN 3X12 MFZN BK
JC11	HRF8000-EA	R CHIP	1/8 0 OHM 3216	M381D	7122401612	SCREW TAPPING	T2S TRS 4X16 MFZN BK
JC12-JC13	HRFT000-CA	R CHIP	1/10 0 OHM 2012	M682	4856814900	CLAMP WIRE	NYLON 66
JC14	HRF8000-EA	R CHIP	1/8 0 OHM 3216	M683	4856812001	TIE CABLE	NYLON66 DA100
JC15	HRFT000-CA	R CHIP	1/10 0 OHM 2012	P401	4859240020	CONN WAFER	YFW500-05

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
P601	485923162S	CONN WAFER	YW025-03 (STICK)	QCY02	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
P802A	4859242220	CONN WAFER	YFW800-02	QCY03	T2SA1037KB	TR CHIP	2SA1037AKT146-R
P803	4850701S06	CONNECTOR	YFH800-01+YPT018+ULW=300	QCY04	T2SA1037KB	TR CHIP	2SA1037AKT146-R
P804	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	QU04	TKTC3202Y-	TR	KTC3202Y (TP)
PA501	4850708N08	CONNECTOR	BIC-08T-25T+C-20T+ULW=400	QU05	TKTA1266Y-	TR	KTA1266Y (TP)
PAS03	4850707V03	CONNECTOR	60-8283-3078-45+ULW=100	R110	RD-4Z392J-	R CARBON FILM	1/4 3.9K OHM J
PAU01	4850706N07	CONNECTOR	60-8283-3068-45+USW=250	R302	RN01B331JS	R METAL FILM	1W 330 OHM J SMALL
PS01	4859278120	CONN WAFER	TKC-G06P-A1	R305	RN01B471JS	R METAL FILM	1W 470 OHM J SMALL
PS02	4859278220	CONN WAFER	TKC-G10P-A1	R306	RN01B561JS	R METAL FILM	1W 560 OHM J SMALL
PS04	485923182S	CONN WAFER	YW025-05 (STICK)	R307	RN01B129JS	R METAL FILM	1W 1.2 OHM J SMALL
⚠ PWC01	4859907910	CORD POWER AS	ME301P+TER=1830	R308	RD-4Z273J-	R CARBON FILM	1/4 27K OHM J
PZ01	4859245710	CONN HOUSING	00-8370-041-000-800	R312	RN-4Z1502F	R METAL FILM	1/4 15K OHM F
Q401	TKTC3207--	TR	KTC3207 (TP)	R313	RN-4Z1603F	R METAL FILM	1/4 160K OHM F
Q402	PTA2SW7200	HEAT SINK ASS'Y	T2SD2499-- + 7174301011	R401	RN02B101JS	R METAL FILM	2W 100 OHM J SMALL
Q402	T2SD2499--	TR	2SD2499	R402	RN01B229JS	R METAL FILM	1W 2.2 OHM J SMALL
Q402A	4857027200	HEAT SINK	AL T1.0	R403	RN01B479JS	R METAL FILM	1W 4.7 OHM J SMALL
Q402B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN	R404	RN01B229JS	R METAL FILM	1W 2.2 OHM J SMALL
Q402C	4856215201	WASHER	SPCC	R409	RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J
⚠ Q801	PTQ2SW4500	HEAT SINK ASS'Y	T2SK2564-- + 7174300811	R410	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
Q801	T2SK2564--	FET	2SK2564	R414	RN01B562JS	R METAL FILM	1W 5.6K OHM J SMALL
Q801A	4857024500	HEAT SINK	AL EX B/K	R415	RD-4Z100J-	R CARBON FILM	1/4 10 OHM J
Q801B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	R417	RN02B101JS	R METAL FILM	2W 100 OHM J SMALL
Q820	TKSA1013Y-	TR	KSA1013Y (TP)	R503	RD-4Z824J-	R CARBON FILM	1/4 820K OHM J
Q821	TKSA1013Y-	TR	KSA1013Y (TP)	R504	RD-4Z121J-	R CARBON FILM	1/4 120 OHM J
Q823	TKSA1013Y-	TR	KSA1013Y (TP)	R505	RD-4Z201J-	R CARBON FILM	1/4 200 OHM J
QC501	T2SA1037KB	TR CHIP	2SA1037AKT146-R	R506	RD-4Z201J-	R CARBON FILM	1/4 200 OHM J
QC502	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R507	RD-4Z201J-	R CARBON FILM	1/4 200 OHM J
QC503	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R511	RD-4Z151J-	R CARBON FILM	1/4 150 OHM J
QC551	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R533	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
QC601	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R604	RN02B339JS	R METAL FILM	2W 3.3 OHM J SMALL
QC822	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R605	RD-2Z331J-	R CARBON FILM	1/2 330 OHM J
QC824	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	⚠ R801	DSVC471D14	VARISTOR	SVC471D14A
QC825	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	⚠ R802	RX10B229JN	R CEMENT	10W 2.2 OHM J BENCH 4P
QC826	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R803	RD-4Z394J-	R CARBON FILM	1/4 390K OHM J
QCS01	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R804	RD-4Z394J-	R CARBON FILM	1/4 390K OHM J
QCS02	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R805	RD-4Z333J-	R CARBON FILM	1/4 33K OHM J
QCS03	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R806	RD-4Z432J-	R CARBON FILM	1/4 4.3K OHM J
QCT01	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R807	RF02Z228J-	R FUSIBLE	2W 0.22 OHM J (TAPPING)
QCT02	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	⚠ R816	DEC7R0M140	POSISTOR	ECPAC7R0M140
QCT03	T2SA1037KB	TR CHIP	2SA1037AKT146-R	R820	RS02Z828JS	R M-OXIDE FILM	2W 0.82 OHM J SMALL
QCU01	T2SA1037KB	TR CHIP	2SA1037AKT146-R	R821	RD-4Z363J-	R CARBON FILM	1/4 36K OHM J
QCU02	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R826	RD-4Z100J-	R CARBON FILM	1/4 10 OHM J
QCU03	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R827	RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J
QCY01	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	R831	RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
R833	RD-4Z472J-	R CARBON FILM	1/4 4.7 OHM J	RC520	HRFT390JCA	R CHIP	1/10 39 OHM J 2012
R836	RN01B124JS	R METAL FILM	1W 120K OHM J SMALL	RC521	HRFT914JCA	R CHIP	1/10 910KOHM J 2012
⚠ R889	RC-2Z565KP	R CARBON COMP	1/2 5.6M OHM K	RC522	HRFT511JCA	R CHIP	1/10 510 OHM J 2012
R902	RN01B152JS	R METAL FILM	1W 1.5K OHM J SMALL	RC523	HRFT511JCA	R CHIP	1/10 510 OHM J 2012
R903	RN01B152JS	R METAL FILM	1W 1.5K OHM J SMALL	RC524	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R904	RN01B152JS	R METAL FILM	1W 1.5K OHM J SMALL	RC527	HRFT223JCA	R CHIP	1/10 22K OHM J 2012
R905	RN01B124JS	R METAL FILM	1W 120K OHM J SMALL	RC528	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
R906	RN01B124JS	R METAL FILM	1W 120K OHM J SMALL	RC529	HRFT822JCA	R CHIP	1/10 8.2K OHM J 2012
R907	RN01B124JS	R METAL FILM	1W 120K OHM J SMALL	RC530	HRFT362JCA	R CHIP	1/10 3.6K OHM J 2012
RC101	HRFT153JCA	R CHIP	1/10 15K OHM J 2012	RC531	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC102	HRFT104JCA	R CHIP	1/10 100K OHM J 2012	RC532	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC103	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	RC534	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC104	HRFT473JCA	R CHIP	1/10 47K OHM J 2012	RC541	HRFT205JCA	R CHIP	1/10 2M OHM J 2012
RC105	HRFT473JCA	R CHIP	1/10 47K OHM J 2012	RC542	HRFT564JCA	R CHIP	1/10 560K OHM J 2012
RC106	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC551	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC107	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC552	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC108	HRFT331JCA	R CHIP	1/10 330 OHM J 2012	RC553	HRFT910JCA	R CHIP	1/10 91 OHM J 2012
RC109	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RC601	HRFT622JCA	R CHIP	1/10 6.2K OHM J 2012
RC110	HRFT153JCA	R CHIP	1/10 15K OHM J 2012	RC602	HRFT242JCA	R CHIP	1/10 2.4K OHM J 2012
RC112	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC603	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC113	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC607	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RC301	HRFT682JCA	R CHIP	1/10 6.8K OHM J 2012	RC608	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC309	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012	RC609	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RC310	HRFT333JCA	R CHIP	1/10 33K OHM J 2012	RC822	HRFT363JCA	R CHIP	1/10 36K OHM J 2012
RC311	HRFT113JCA	R CHIP	1/10 11K OHM J 2012	RC823	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
RC314	HRFT000-CA	R CHIP	1/10 0 OHM 2012	RC824	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RC405	HRFT153JCA	R CHIP	1/10 15K OHM J 2012	RC825	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RC406	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RC828	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RC407	HRFT433JCA	R CHIP	1/10 43K OHM J 2012	RC829	HRFT304JCA	R CHIP	1/10 300K OHM J 2012
RC408	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RC830	HRFT223JCA	R CHIP	1/10 22K OHM J 2012
RC411	HRFT331JCA	R CHIP	1/10 330 OHM J 2012	RC832	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC412	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC834	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC501	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC835	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC502	HRFT682JCA	R CHIP	1/10 6.8K OHM J 2012	RC837	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC508	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RC908	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RC509	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012	RC909	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC510	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012	RC910	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RC512	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RC911	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC513	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012	RC912	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RC514	HRFT472FCA	R CHIP	1/10 4.7K OHM F 2012	RC913	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC515	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCA01	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RC517	HRFT123JCA	R CHIP	1/10 12K OHM J 2012	RCA02	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC518	HRFT123JCA	R CHIP	1/10 12K OHM J 2012	RCS01	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC519	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCS02	HRFT103JCA	R CHIP	1/10 10K OHM J 2012

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LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
RCS03	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCS62	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS06	HRFT000-CA	R CHIP	1/10 0 OHM 2012	RCS63	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RCS07	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCS64	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS08	HRFT473JCA	R CHIP	1/10 47K OHM J 2012	RCS65	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
RCS09	HRFT393JCA	R CHIP	1/10 39K OHM J 2012	RCS66	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
RCS10	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCS67	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
RCS11	HRFT154JCA	R CHIP	1/10 150K OHM J 2012	RCS68	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
RCS12	HRFT154JCA	R CHIP	1/10 150K OHM J 2012	RCS69	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RCS14	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCS70	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RCS15	HRFT362JCA	R CHIP	1/10 3.6K OHM J 2012	RCS71	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS16	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	RCS72	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS17	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCS73	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS18	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCS74	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS19	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCS75	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS22	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCS76	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS23	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCS77	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS24	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCS78	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RCS25	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCS79	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RCS28	HRFT223JCA	R CHIP	1/10 22K OHM J 2012	RCS81	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012
RCS29	HRFT000-CA	R CHIP	1/10 0 OHM 2012	RCS82	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012
RCS30	HRFT106JCA	R CHIP	1/10 10M OHM J 2012	RCS84	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RCS31	HRFT104JCA	R CHIP	1/10 100K OHM J 2012	RCS85	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RCS32	HRFT105JCA	R CHIP	1/10 1M OHM J 2012	RCS86	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RCS33	HRFT511JCA	R CHIP	1/10 510 OHM J 2012	RCS87	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RCS35	HRFT751JCA	R CHIP	1/10 750 OHM J 2012	RCT02	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RCS36	HRFT471JCA	R CHIP	1/10 470 OHM J 2012	RCT03	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RCS37	HRFT105JCA	R CHIP	1/10 1M OHM J 2012	RCT04	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RCS38	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT05	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RCS39	HRFT471JCA	R CHIP	1/10 470 OHM J 2012	RCT06	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RCS40	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCT08	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RCS46	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT09	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RCS47	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT11	HRFT911JCA	R CHIP	1/10 910 OHM J 2012
RCS48	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT12	HRFT132JCA	R CHIP	1/10 1.3K OHM J 2012
RCS49	HRFT392JCA	R CHIP	1/10 3.9K OHM J 2012	RCT13	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RCS50	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT14	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RCS51	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT15	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RCS52	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	RCT17	HRFT911JCA	R CHIP	1/10 910 OHM J 2012
RCS53	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	RCT18	HRFT132JCA	R CHIP	1/10 1.3K OHM J 2012
RCS54	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT19	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RCS55	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	RCT20	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RCS56	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	RCU01	HRFT683JCA	R CHIP	1/10 68K OHM J 2012
RCS57	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	RCU02	HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
RCS60	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCU03	HRFT105JCA	R CHIP	1/10 1M OHM J 2012
RCS61	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCU04	HRFT392JCA	R CHIP	1/10 3.9K OHM J 2012

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
RCU07	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012	RCY25	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RCU08	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012	RCY26	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RCU09	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012	RCZ01	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RCU10	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012	RCZ02	HRFT183JCA	R CHIP	1/10 18K OHM J 2012
RCU11	HRFT273JCA	R CHIP	1/10 27K OHM J 2012	RCZ03	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RCU12	HRFT223JCA	R CHIP	1/10 22K OHM J 2012	RCZ04	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RCU13	HRFT223JCA	R CHIP	1/10 22K OHM J 2012	RCZ06	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RCU14	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	RCZ09	HRFT220JCA	R CHIP	1/10 22 OHM J 2012
RCU15	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012	RCZ10	HRFT751JCA	R CHIP	1/10 750 OHM J 2012
RCU16	HRFT103JCA	R CHIP	1/10 10K OHM J 2012	⚠ RLY01	5SC0101338	SW RELAY	DQ5D1-O(M)/GJ-SS-105LM
RCU19	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012	RS13	RD-4Z121J-	R CARBON FILM	1/4 120 OHM J
RCU20	HRFT229JCA	R CHIP	1/10 2.2 OHM J 2012	RS26	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
RCU21	HRFT229JCA	R CHIP	1/10 2.2 OHM J 2012	RS27	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCU22	HRFT334JCA	R CHIP	1/10 330K OHM J 2012	RS41	RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J
RCU23	HRFT123JCA	R CHIP	1/10 12K OHM J 2012	RS42	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCU24	HRFT221JCA	R CHIP	1/10 220 OHM J 2012	RS43	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCU25	HRFT822JCA	R CHIP	1/10 8.2K OHM J 2012	RS44	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCU26	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012	RS45	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCU27	HRFT101JCA	R CHIP	1/10 100 OHM J 2012	RS58	RD-4Z471J-	R CARBON FILM	1/4 470 OHM J
RCU28	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012	RS59	RD-4Z471J-	R CARBON FILM	1/4 470 OHM J
RCU29	HRFT683JCA	R CHIP	1/10 68K OHM J 2012	RS83	RN02B339JS	R METAL FILM	2W 3.3 OHM J SMALL
RCU30	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012	RS88	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
RCV01	HRFT750JCA	R CHIP	1/10 75 OHM J 2012	RS90	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCV02	HRFT101JCA	R CHIP	1/10 100 OHM J 2012	RS91	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
RCY01	HRFT331JCA	R CHIP	1/10 330 OHM J 2012	RT01	RD-4Z240J-	R CARBON FILM	1/4 24 OHM J
RCY02	HRFT331JCA	R CHIP	1/10 330 OHM J 2012	RT10	RD-4Z681J-	R CARBON FILM	1/4 680 OHM J
RCY03	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012	RT16	RD-4Z681J-	R CARBON FILM	1/4 680 OHM J
RCY04	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012	RU17	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
RCY05	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012	RU18	RD-4Z470J-	R CARBON FILM	1/4 47 OHM J
RCY06	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012	⚠ SCT01	4859303430	SOCKET CRT	PCS633A
RCY07	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012	SS01	TST5811---	TR PHOTO	ST-5811
RCY08	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	SS01A	97P2343500	HOLDER TR	ABS FR
RCY11	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	SS02	TST5811---	TR PHOTO	ST-5811
RCY12	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	SS02A	97P2343500	HOLDER TR	ABS FR
RCY13	HRFT223JCA	R CHIP	1/10 22K OHM J 2012	SS03	1SG239S---	IC SENSOR	SG-239S
RCY14	HRFT511JCA	R CHIP	1/10 510 OHM J 2012	SS04	1SG239S---	IC SENSOR	SG-239S
RCY15	HRFT201JCA	R CHIP	1/10 200 OHM J 2012	SWS01	5SN0101Z20	SW DETECT	JDS1105-6X
RCY16	HRFT201JCA	R CHIP	1/10 200 OHM J 2012	SWT01	5S50101090	SW TACT	SKHV17910A
RCY17	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012	SWT02	5S50202002	SW TACT	KPT-2105A 2C-2P
RCY18	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	SWT03	5S50202002	SW TACT	KPT-2105A 2C-2P
RCY19	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012	SWT04	5S50101090	SW TACT	SKHV17910A
RCY20	HRFT822JCA	R CHIP	1/10 8.2K OHM J 2012	SWT05	5S50101090	SW TACT	SKHV17910A
RCY21	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012	SWT06	5S50101090	SW TACT	SKHV17910A
RCY24	HRFT102JCA	R CHIP	1/10 1K OHM J 2012	SWT07	5S50101090	SW TACT	SKHV17910A

## ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	LOC	PART CODE	PART NAME	DESCRIPTION
SWT08	5S50101090	SW TACT	SKHV17910A	X501	5XE3R5795C	CRYSTAL QUARTZ	HC-49/U 3.579545MHZ 20PPM
T401	50D0000022	TRANS DRIVE	HD-15D	XCS01	HXA32R768C	CRYSTAL CHIP QUARTZ	32.768KHZ 20PPM 8038
⚠ T402	50H0000198	FBT	FSA37012M	XS02	5XJ16R000E	CRYSTAL QUARTZ	HC-49S 16.000000MHZ 30PPM
⚠ T802	50M3541T3-	TRANS SMPS	TSM-3541T3	XY01	5XE3R5795B	CRYSTAL QUARTZ	HC-49/U 3.579545MHZ 15PPM
TU01	5800000032	COIL OSC	DE0-006	Z101	5PTSF5221P	FILTER SAW	TSF5221P
⚠ U102	4859719130	TUNER VARACTOR	DT5-NF20F	Z102	5PXPS45MB-	FILTER CERA	TPS-4.5MB TRAP (TAPPING)

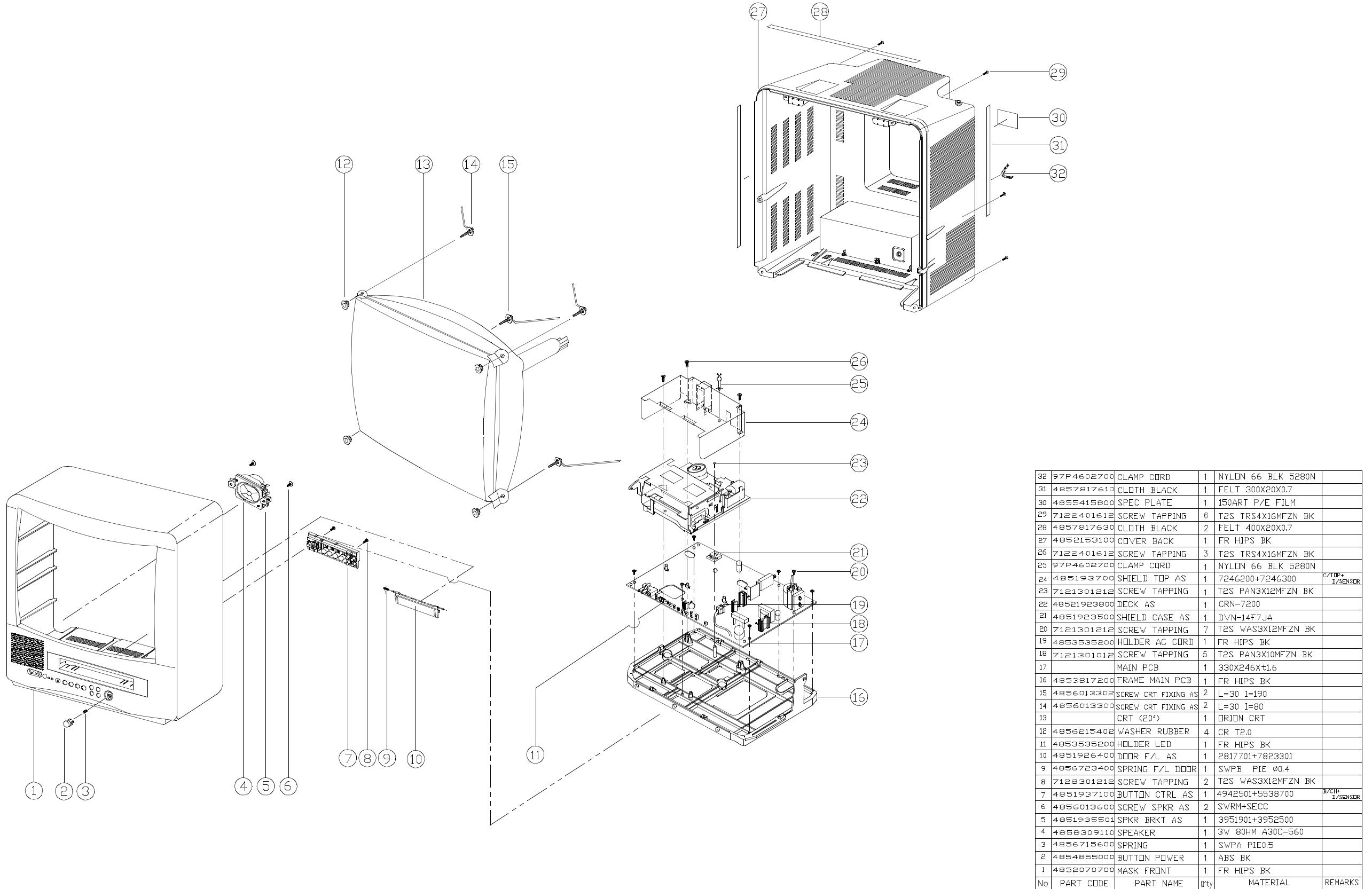
### □ OPTION PARTS LIST

#### 1. CN-071 13" / 19" DIFFERENT PARTS LIST

LOC	PART NAME	DVQ-13H1FC		DVQ-19H1FC		REMARK
		PART CODE	DESCRIPTION	PART CODE	DESCRIPTION	
0001	ANT ROD	4850A02510	S3BW216B (L=600 MM)		X	OPTION
0003	TRANS ANT MATCHING	4850A00250	IMT-06		X	OPTION
C402	C MYLAR	CMYH3C692J	1.6KV BUP 6900PF J	CMYH3C622J	1.6KV BUP 6200PF J	RETRACE
PA601	CONNECTOR	4850703S53	YH025-03+35098+ULW=500	4850703S50	YH025-03+35098+ULW=200	
Q402A	HEAT SINK		X	4850727200	AL T1.0	
Q402B	SCREW TAPPTITE		X	7174301011	TT2 RND 3X10 MFZN	
Q402C	WASHER		X	4856215201	SPCC	
R306	R METAL FILM	RN01B471JS	1W 470 OHM J SMALL	RN01B561JS	1W 560 OHM J SMALL	V CENTER
R403	R METAL FILM	RN01B369JS	1W 3.6 OHM J SMALL	RN01B479JS	1W 4.7 OHM J SMALL	HEATER
RC406	R CHIP	HRFT113JCA	1/10 11K OHM J 2012	HRFT103JCA	1/10 10K OHM J 2012	X-RAY
RC502	R CHIP	HRFT822JCA	1/10 8.2K OHM J 2012	HRFT682JCA	1/10 6.8K OHM J 2012	ABL
RC823	R CHIP	HRFT363JCA	1/10 36K OHM J 2012	HRFT273JCA	1/10 27K OHM J 2012	OCP
V01	COIL DY	58D0000082	ODY-M1489	58D0000083	ODY-M2050	
V901	CRT BARE	48A96414N1	A34JLL40X	48A96420N1	A48JL40X(W)	
ZZ131	CRT GROUND NET	48519A4710	1401S-1015-1P	48519A5110	2001S-1015-1P	
ZZ132	COIL DEGAUSSING	58G0000078	DC-1400	58G0000122	DC-2030	

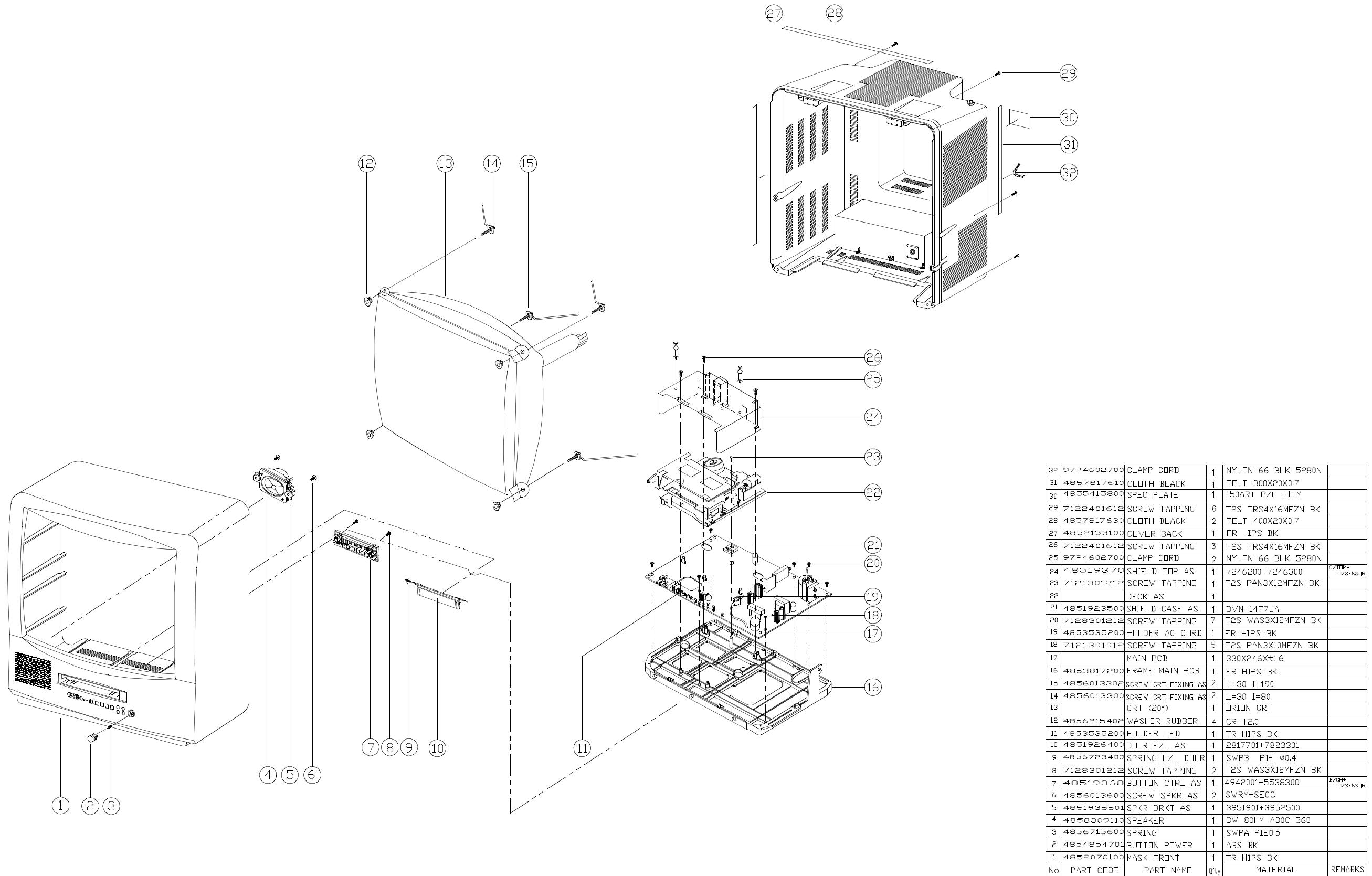
# EXPLODED VIEW

## 1. DVQ-19H2FC

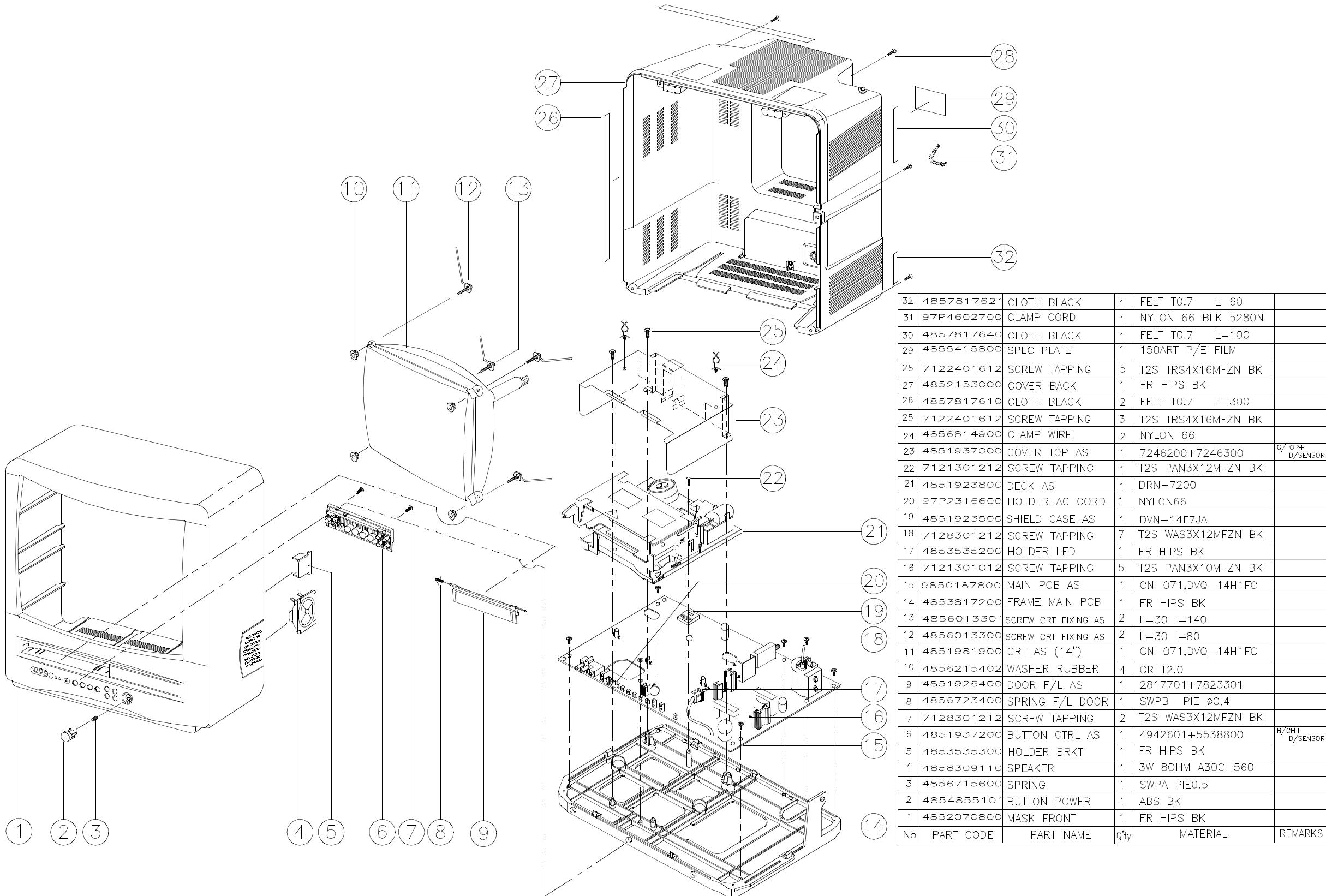


## EXPLODED VIEW

### 2. DVQ-19H1FC

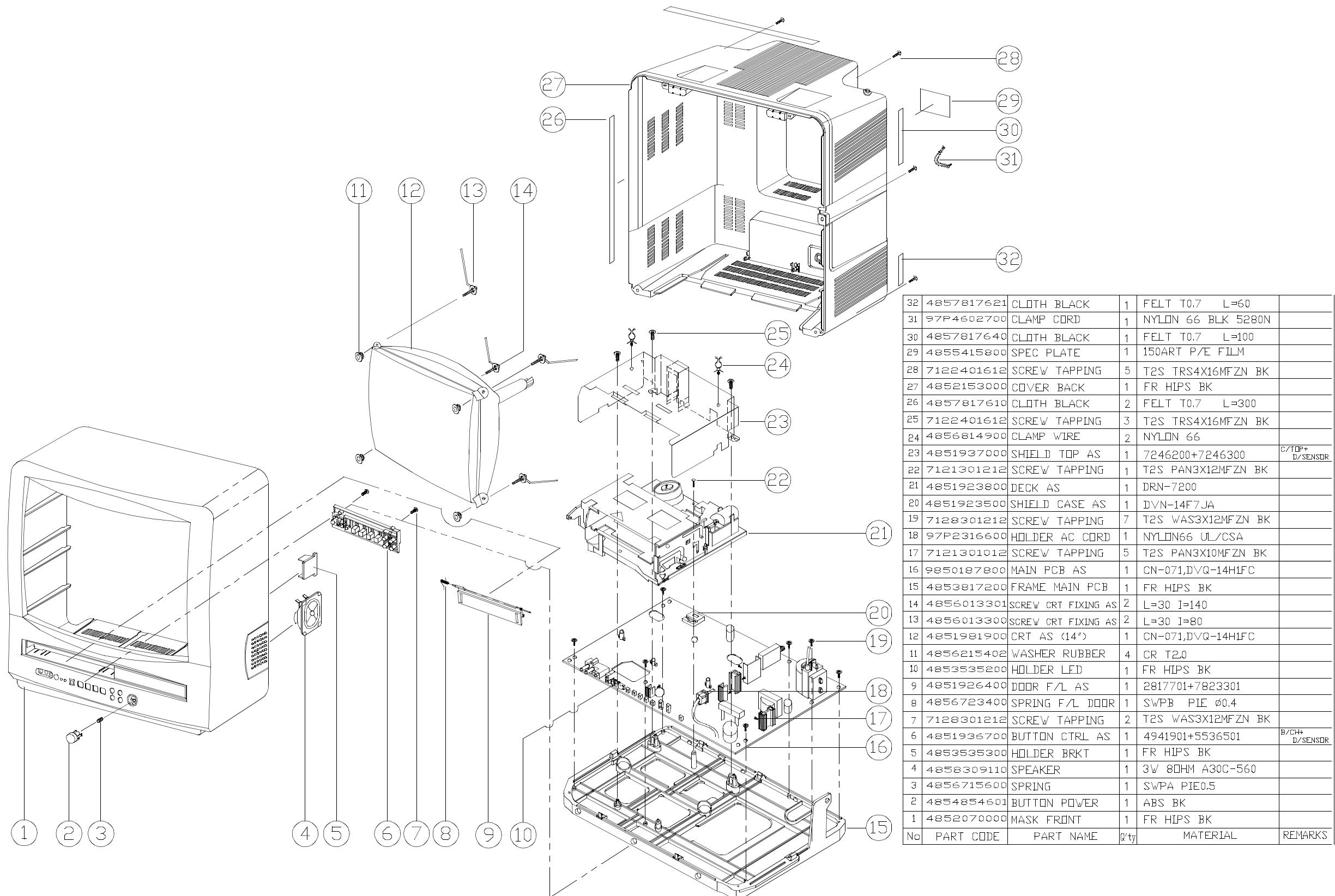


## 3. DVQ-13H2FC



## EXPLODED VIEW

### 4. DVQ-13H1FC



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